

Tank and Petroleum Use Mishaps

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

USA, ILL, SPRINGFIELD

OCTOBER 20 2014.

FORMER GAS STATIONS, CONVENIENCE STORES A DIFFICULT CLEANUP CHALLENGE

Tim Landis

Gasoline sold for \$2.40 a gallon on the evening of March 12, 2006, at the corner of South Grand and Pope avenues in Springfield.

The convenience store and gas station never reopened after it was damaged by tornadoes that hit the city that spring. The gas-price marquee (now minus a zero on one side), a mostly empty building and fuel pumps are all that remain.

Abandoned gas stations are a special cleanup challenge for neighbors, community groups, city code enforcement and environmental regulators, including in some cases finding owners who simply lock up and walk away.

"People were throwing junk in the alley," said Betty Starks, president of the Mathers & Wells Neighborhood Association, referring to a closed Citgo Fresh Express at 1529 E. Cook St.

The gas station and convenience store was a traditional spot for gas and groceries in the neighborhood before the business shut down early this year. The city building department took the owners, identified as Ali M. Okam and Yahya A. Mushreh in county property tax records, to administrative court for failure to register the property as a vacant building.

The city also cut weeds and tree saplings that had grown up around the property. The owners since have registered the building, according to the city, and have filed plans to remodel it as a convenience store, minus fuel sales.

In 2010, officials in Chatham had to call health inspectors after owners abandoned the Chatham Gas convenience store at Illinois 4 and Walnut Street. The owners, who could not be located, left behind dairy products that spoiled and eventually exploded.

The property since has reopened as a BP service station and convenience store.

Springfield city building manager John Sadowski said complaints about abandoned gas station and convenience stores are common, but owners typically can be found through state records on underground tanks or property tax records.

"We did have complaints about the Cook Street location," Sadowski said. "They've registered the building, and they actually applied for a building permit to remodel the convenience store."

Starks said the business served its purpose, and she would like to see the property cleaned up and put back to use.

"People used it for groceries, small things," she said. "They'd go in and buy bread and milk."

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Underground tanks

Abandoned gas stations have the added element of underground tanks. According to figures from the Illinois state fire marshal's office, there are more than 23,000 sites registered statewide where tanks have been removed or abandoned.

Most are at the sites of former gas stations, though the list also includes chemical storage.

There are 391 in Sangamon County, including 292 in Springfield.

"There are procedures for underground tanks," Kim Biggs, a spokeswoman for the Illinois Environmental Protection Agency, wrote in an email. "The tanks have to be emptied and vented. If the tanks are abandoned in-place, they have to be emptied, vented and filled with an inert material, such as sand."

A tax on motor fuel sales funds the state's Leaking Underground Storage Tank program for contamination cleanup. The LUST fund has paid out more than \$800 million since it was established in 1989, according to the EPA.

Stations owners are responsible for digging up or sealing unused tanks, said Bill Fleischli, executive vice president of the Illinois Petroleum Marketers Association. The Springfield-based association represents the state's convenience store operators.

"You either have to remove them or upgrade them," Fleischli said, noting that the cost often runs upwards of \$100,000, depending on the number of tanks.

Fleischli said the cost of maintenance or removal is behind a trend toward convenience store sales only, especially among small operators.

"You have a lot of money tied up," Fleischli said. "If you're not moving gas quickly, then you're probably not making any money on it."

Repurposed sites

Perry Hienes and Andre Booker, partners in P.T.'s Bar-B-Que, saw barbecue-stand possibilities in a former service station and convenience store at 601 S. Ninth St. in Springfield. The station, which has been closed for several years, is at the southeast corner of the Lincoln Home National Historic Site.

"We wanted to be closer to downtown," Booker said. "We've got the Lincoln Home, hospitals and the neighborhoods."

Hienes and Booker relocated their P.T.'s stand from a longtime location on Taylor Avenue. The stand has been set up on the Ninth Street parking lot while the convenience store is remodeled.

Booker said they hope to move into the building in November.

The business lost its space on Taylor Avenue, said Hienes, who also operates a P.T.'s Bar-B-Que in Decatur. Hienes has been in Springfield for about 20 years.

"It (601 S. Ninth) became available, and I started out on Ninth Street," said Hienes, who is leasing the space. "We also wanted to be closer to downtown."

The Decatur stand also is at the site of an old gas station. Hienes said the small building, easy access and drive-up features at the Ninth Street location fit well into to the order-and-go nature of a barbecue stand — with some changes.

"We have a lot of work to do," Hienes said.

Underground tanks

There are more than 23,000 sites in Illinois where underground tanks have been removed or abandoned, according to the Office of the Illinois State Fire Marshal. Most are the result of gasoline stations that have closed or moved.

Here are the numbers for local counties:

- * Sangamon: 391, including 292 in Springfield
- * Macoupin: 150
- * Morgan: 144
- * Montgomery: 131
- * Logan: 123

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* Christian: 106

* Mason: 87

* Menard: 39

<http://www.sj-r.com/article/20141018/News/141019465#ixzz3LRBEpW9B>

USA, CO, GREELY

OCTOBER 21 2014.

SPILL REPORTS FOR OCT. 20

The following spills were reported to the Colorado Oil and Gas Conservation Commission in the past two weeks.

Information is based on Form 19, which operators must fill out detailing the leakage/spill events. Any spill release which may impact waters of the state must be reported as soon as practical. Any spill of five barrels or more must be reported within 24 hours, and any spill of one barrel or more which occurs outside secondary containment, such as metal or earthen berms, must also be reported within 24 hours, according to COGCC rules. Spills and leaks are typically found during routine maintenance on existing wells, though some actual "spills" do occur among the 19,000-plus wells in the county.

Noble Energy Inc., reported on Oct. 16 that a leak developed in a water vault outside of LaSalle. The leak was discovered during operational removal of the produced water vault. It was discovered that the soil beneath the vault had been impacted. It is approximated that less than five barrels of produced water were spilled. Production equipment was shut in and will remain shut in until an excavation occurs and the facility is put back in production.

Noble Energy Inc., reported on Oct. 13 that a spill outside of Greeley is currently under investigation, after impacted soil was discovered near a well head. It is approximated that less than five barrels of condensate spilled and less than five barrels of produced water spilled. The production equipment was shut in and a third party environmentalist was contacted for consultation of the sight and to oversee an upcoming excavation.

Noble Energy Inc., reported on Oct. 13 that a flow line leading from a water vault to a produced water tank had leaked outside of Greeley. The leak was discovered during operations and it was approximated that less than five barrels of produced water spilled. All production equipment was shut in and an investigation will determine if the water vault might have contributed to the leak. An excavation will be scheduled to remove the impacted soil.

Kerr McGee Oil & Gas Onshore LP, reported on Oct. 10 that a flow line release was discovered outside of Platteville. The leak was discovered during swabbing activities, and it is unknown the amount of condensate spill and produced water that spilled, but it is estimated to be less than five barrels of spilled fluid. The cause of the leak was determined to be faulty equipment. During excavation activities groundwater was encountered at four feet below the ground surface. A sample of ground water was analyzed at Origins Laboratory in Denver. Benzene concentrations were determined to be above the Colorado Oil and Gas Conservation Commission 910-1 standards. Approximately 10 barrels of ground water were removed via a vacuum truck and transported to an injection facility. A second ground water sample was taken and labs concluded that concentrations were below the COGCC standards. The excavation area was subsequently backfilled. Activated carbon was also introduced to the area to re-mediate any remaining impacts.

Bonanza Creek Energy Operating Company LLC., reported on Oct. 10 that during the transportation of a flow back tank that residual flow back fluid in the tank shifted and spilled out of the tank hatch outside of Briggsdale. It is approximated that less than five barrels of flow back fluid were spilled. The impacted soil was removed for disposal and replaced with clean road base. Confirmation sampling is underway.

<http://bakken.com/news/id/223712/spill-reports-oct-20/>

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USA, PA, ELDERTON

OCTOBER 22 2014.

THE DRILLING INDUSTRY'S EXPLOSION PROBLEM

Mike Soraghan

Temperatures below 20 degrees Fahrenheit froze the valve on the back of Greg Bish's frack truck. To thaw it, he fetched a blowtorch and put the 4-inch flame to the metal.

The explosion blew him 75 feet, over a 7-foot-tall barbed-wire fence, and killed him.

It might seem dangerous to apply a propane torch to the back of a large metal tank holding natural gas production waste, as Bish did that morning in 2010 just outside Elderton, Pa. But in the oil and gas industry, it's not unusual.

The oil and gas industry has more deaths from fires and explosions than any other private industry, according to an *EnergyWire* review of federal labor statistics. It employs less than 1 percent of the U.S. workforce, but in the past five years it has had more than 10 percent of all workplace fatalities from fires and explosions.

An investigation of the drilling industry's worker safety record and what it means for those living amid the boom. [Click here](#) to read the series.

The pace dipped last year but has stayed high even as oil and gas companies, using advanced hydraulic fracturing techniques, pushed into more densely populated areas and fought to keep their exemption from regulations designed to prevent explosions at industrial sites.

Industry leaders say oil and gas well sites don't have a problem with fires and explosions.

"There is little performance data showing there is a safety problem at these facilities," the American Petroleum Institute, the industry's biggest lobbying group, wrote earlier this year in a filing with the Occupational Safety and Health Administration. "The risk level is not high."

Brandie Hanley, however, thinks the risk level is high.

In 2012, an oil well exploded in her rural northwest Ohio neighborhood. The blast killed a 19-year-old worker, Paul Sherman, and hurled an oil storage tank more than 250 feet. If it had been launched in a different direction, she said, it could have hit her duplex, or a nearby group home for disabled adults.

"Nobody would have made it out of there," Hanley said.

Adding to her worries, the owners drilled a new well a week later, just a little farther away.

"There should be yards or miles between people and those things, but they're right in people's backyards," she said. "You shouldn't have to be afraid to live where you live."

Ohio allows wells to be drilled as close as 100 feet from homes. OSHA accident investigations show that explosions at well sites can hurl heavy steel tanks twice that far.

Other states ban wells within 500 feet of homes, while some have no rules on how close a well can be. But even 500 feet might not be safe. A 2012 explosion at a compressor station in Colorado launched metal parts more than 750 feet.

"If you look at the zoning requirements, they aren't very strict," said Vidisha Parasram, who led a U.S. Chemical Safety Board investigation into storage tank explosions. "It's literally a patchwork across the country."

Greg Bish took a job at West Penn Energy Services in September 2010 to be closer to home and his favorite fishing spots. He was killed in an explosion on Dec. 9, 2010. Photo courtesy of the Bish family.

That CSB study found 26 explosions and fires since 1983 at conventional oil and gas sites that killed 44 members of the public and injured 25 others. Often, they were young people "hanging out" at tank sites. The board, fashioned after the National Transportation Safety Board, made six recommendations to government agencies and industry groups when it released the study in 2011. None has been implemented.

Jeff Eshelman, spokesman for the Independent Petroleum Association of America, said the number of fatal fires and explosions is small and getting smaller.

"Of the 4,405 workplace fatalities which occurred in the United States in 2013, 13 were associated with fire/explosions in E&P operations, that's down almost half from the prior year 2012 with 23 incidents,"

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Eshelman said. "While this represents a very small percentage, it is certainly unacceptable, and industry safety is our No. 1 priority."

Last year's 13 fire and explosion deaths, though, were more than for any other private industry. Oil and gas had 112 fatalities overall in 2013, down from 142 in 2012.

The only "industry" to have more fire and explosion fatalities than oil and gas in 2013 was firefighting, which had 42. That was a tenfold increase from 2012, driven by several disasters such as the Yarnell Hill wildfires in Arizona that claimed the lives of 19 firefighters.

Eshelman said measures have been adopted throughout the industry to prevent fires and explosions, such as better design standards, gas detectors, strict control of potential ignition sources, rigid smoking restrictions and new firefighting equipment.

But the thick files generated by OSHA investigations at fatal well explosions detail dangerous habits at well sites. The carelessness not only injured or killed workers but risked the safety of those living nearby.

Some examples:

- Two rig supervisors continued to drill at an AB Resources well site near Moundsville, W.Va., in 2010, even after the air filled with flammable methane gas. It then exploded, injuring seven men and melting the rig. The methane came from an abandoned coal mine the Union Drilling Inc. crew had already pierced once when drilling an adjacent well. They were using a process called "drilling on air" that is particularly dangerous when the drill bit hits oil or gas.
- After an explosion killed a company employee, the safety manager of Weatherford, Texas-based C&R Downhole Drilling told investigators she was new to the position and did not have any formal training in safety. Investigators believe the employee, Tommy Paxton, 45, and four other men were standing in a "flammable vapor cloud" at the Antero Resources site near West Union, W.Va., in 2013 when a spark triggered the explosion. Jason Means, 37, an employee of Nabors Completion and Production Services, was also killed and three others were injured. U.S. EPA in 1998 exempted oil and gas sites from Clean Air Act risk management regulations based on the belief that oil and gas coming out of the ground is "unlikely to form large vapor clouds."
- The rented blowout preventer used by Premium Well Drilling at a well near Carrizo Springs, Texas, in 2008 wasn't fully tested after it was installed, and the crew wasn't trained to use it. The blowout preventer also lacked a shear ram, which would have allowed it to close off the well bore when the crew hit a gas pocket and the well "kicked." The rig went up in flames and Jesus Beltran, 67, was killed. Two other workers suffered burns in the fire at the well, owned by Express Oil Co.
- Contract workers killed in a 2011 explosion in Wyoming had no formal training or supervision before being sent to install a fuel line. One worker was welding on a gas line connected to a storage tank containing more than 1,300 gallons of crude oil at a Samson Resources Co. well site outside Casper. The explosion killed James Turner, 55, of Double D Welding and Fabrication, and Gerardo Alatorre and Llewellyn "Louie" Dort, 32, both of Wild West Construction. The blast also hurled two 4,000-gallon metal tanks more than 120 feet and caused a 10-acre fire.
- A battery-powered headlamp worn by a water truck driver appears to have been enough to set off the flammable hydrocarbons venting out of a "brine" wastewater tank at an EQT Production Co. well in February 2013 in Flemington, W.Va. The driver, 43-year-old Brian Hopkins, was working for Central Environmental Services Inc. (CES). He was blown off the catwalk and killed. The explosion tossed a two-story brine tank 100 feet. EQT's tests found no problems with the equipment, but OSHA cited CES for giving employees headlamps that were not "intrinsically safe" around flammable vapors.

The drilling industry's safety record has become increasingly important as the nation's drilling boom pushes into densely populated areas that have less familiarity with drilling.

An explosion at an oil well near Bolivar, Ohio, in 2012 killed a worker, hurled a tank more than 250 feet and alarmed neighbors. Photo by Brandie Hanley.

The Wall Street Journal last year reported that at least 15.3 million Americans lived within a mile of

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a well that had been drilled since 2000. That is more people than live in Michigan or New York City.

The new wells are not always welcomed by their neighbors. Drilling in the suburbs of Denver has prompted some cities to try to ban hydraulic fracturing, or fracking, an essential practice for producing from shale. Even some cities in oil-friendly Texas are weighing bans or sharp restrictions on drilling.

A research paper from the Colorado School of Public Health earlier this year observed that accidents at well sites don't simply jeopardize workers but can also expose those who live nearby to fires, explosions and hazardous chemicals.

"It's absolutely a concern," said John Adgate, chairman of the school's Department of Environmental and Occupational Health and co-author of the research review, which was funded in part by the National Science Foundation and the Department of Energy.

"When you go out and talk to groups, that's what people want to know about," he said, "those kind of potential catastrophic risks."

'Painkillers for a paper cut'

Oil and gas producers are currently fighting to keep their exemption from a set of rules intended to prevent industrial explosions. OSHA developed the "process safety management program" in the 1990s after a series of disasters at refineries and chemical plants.

"PSM," as it's called, helped lower fatalities and generated more information to help prevent accidents. But OSHA officials agreed to leave out oil and gas. Instead, the agency said there should be a separate set of rules to fit the industry's "uniqueness." Shortly after that, presidential administrations changed and the initiative stalled ([EnergyWire](#), Feb. 25).

The April 2013 fertilizer plant explosion in West, Texas, which killed three residents and 12 first responders, prompted the Obama administration to take another look at the PSM rule. Among other ideas, the administration signaled interest in ending the exemption for drilling companies.

Oil and gas companies are fighting the idea, saying the program is a poor fit for the fast-moving drilling business.

Tests on sludge in the tank of the West Penn truck showed it contained "aliphatic hydrocarbons" -- chemical cousins of oil and gas that are prone to explode. Photo courtesy of OSHA.

"Like prescribing painkillers for a paper cut" is how Rick Muncrief described it. Muncrief, senior vice president of operations and resource development for Continental Resources Inc., added in his letter to OSHA that it would likely cause a regulatory "overdose."

The oil and gas industry brings a lot of horsepower to any such regulatory debate. It spent \$145 million lobbying the federal government last year, according to OpenSecrets.org, more than any other industry except pharmaceuticals and insurance.

But the CSB -- the independent agency charged with investigating industrial accidents -- says applying PSM to drilling is the proper remedy for a real problem.

"High rates of worker injuries and fatalities within this sector suggest that PSM requirements are urgently needed," the agency said in comments sent under the signature of Chairman Rafael Moure-Eraso.

Chevron's fire and free pizza

So far this year, there have been at least eight fatal oil and gas explosions in the United States.

The best-known of them -- a blast at a Chevron well in southwest Pennsylvania -- played into the debate on approving drilling at the Pittsburgh airport. Chevron earned national derision after the February fire for distributing coupons for free pizza to locals. Many residents, though, said they appreciated the gesture.

State officials found chaotic management of the site. Chevron had used "no fewer than seven" site managers at the site in the week before the fire, some of whom had "virtually no oil field experience" ([EnergyWire](#), Aug. 8).

The Feb. 11 accident was at least the second fatal oil and gas industry explosion of the year. Daniel Rice, 33, was killed in January in Knoxville, Ark., when a truck tank of drilling wastewater exploded. Workers had been thawing valves on the tank with a propane torch.

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Common practice

It's not an unusual way to melt the ice on the back of a truck. That's what OSHA inspectors found when they looked into the accident that killed Greg Bish.

"I have thawed many of the valves using the torch," David Champion, a co-worker of Bish with 34 years of experience, told an inspector. "We also thaw the frac tanks."

Several others said the same thing. In the months before the accident, a Pennsylvania safety consultant had told OSHA it was "common practice."

Michael Rubeo of Lancaster Safety Consulting wrote in January 2010 on behalf of a company that used propane torches to thaw frozen lines at production sites. OSHA's response, noting there are no specific federal rules to prevent thawing valves with a propane torch, is part of the agency's investigative file.

Since 2009, oil and gas production has had more deaths from fires and explosion than any private industry. Source: Bureau of Labor Statistics, Census of Fatal Occupational Injuries.

"That was relative to what we were seeing in our region at that time," Rubeo, whose office is in Wexford, Pa., outside Pittsburgh, said in a recent interview. "You drive two hours north of here and get into the more remote areas, and I'm sure any number of practices like that are still performed."

Bish worked for West Penn Energy Services, a 20-year-old company headquartered just outside the small borough of Elderton, Pa., in the thick of the Marcellus Shale boom.

West Penn was no rogue operator. The company's safety manager was on the safety committee of the Pennsylvania Independent Oil and Gas Association. The company had a state-certified safety and health program, which allowed it to get discounts on workers' compensation insurance. West Penn's website states, "We are committed to doing things right."

Investigators found that while West Penn had a "strong safety program" in terms of written materials, many workers said they weren't trained in the practices listed.

West Penn President Michael Zentz did not return phone and email messages. In a statement at the time, the company said, "Our company's foremost priority is ensuring the health and safety of our employees."

The West Penn yard, at the intersection of two highways about an hour's drive northwest of Pittsburgh, backed up to a school. Elderton High School (which has since closed) is about 520 feet up a hill from the truck yard. There's a house about 700 feet away.

Bish was from Ford City, about 25 minutes away. His mother, Kim Bish, said he took the job to be closer to home after a couple of years traveling with fracking crews. That meant more time to hunt and fish and spend time with his girlfriend, she said in an interview.

He also told her his new job was safer. After all, he was driving a "water truck."

But the "water" is waste fluid from oil and gas sites. OSHA took samples of the sludge in the bottom of the tank and found a range of "aliphatic hydrocarbons" -- chemical cousins of oil and gas that are prone to explode.

"He told me, 'I've got a safe job now, Mom,'" she said. "That haunts me every day."

<http://www.eenews.net/stories/1060007532>

AUSTRALIA, N,S,W, SYDNEY

OCTOBER 22 2014.

REPORT OF ENVIRONMENT PROTECTION AUTHORITY COMPETENCE AND RESIDENT SAFETY

The toxic legacy of Botany Bay's transformation from industrial heart to residential hub is being played out in the NSW Upper House.

Residents who have had their groundwater polluted by one of the world's most deadly pollutants, who still live with the world's largest stockpile of this pollutant on their doorsteps, finally have a voice in NSW Parliament.

Whether it is the threat of contaminated drinking water or tests on playground soils, gas flames lighting up the night sky or the "bumps and beeps" ringing out through the night - the people of Botany Bay

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and surrounds have been slugged with over the head with the impacts of the industrial legacy that still lives on.

Concerns about houses being built too close to major industry were echoed in a 1983 report to the state government that recommended buying back houses in Denison St, on the eastern border of the Botany Industrial Park, because of the risk of fatalities if there was a catastrophic incident.

The area came close to realising this “catastrophic” incident in July last year when more than 130,000 litres of highly volatile unleaded fuel gushed after a valve malfunction. Maroubra Station officer Maxwell Metzker said “the tiniest spark could have set off a devastating explosion, flattening the immediate area”.

The fears that the Botany people have been left without adequate government protection form part of a parliamentary inquiry into the performance of NSW’s Environment Protection Authority, particularly over the contamination concerns in the Botany Bay area.

The review has been prompted by resident concern over the failures of chemical giant Orica as well as concern about a proposal for a Bunnings store on Denison St- on a dangerous goods route and the subject of the 1983 report – which has been rezoned and is currently before the joint regional planning panel.

Hywel Lewis-Jones, Ross Salter and Steve Haigh from the Hillsdale and Eastgardens Resident Action Group spoke at the hearing on Monday, expressing concerns the EPA had failed to address the human risk. Kingsford Timber Mitre 10's manager Ross Salter (right).

Mr Haigh said a primary concern to residents was the transport risk on Denison St, Botany.

Mr Haigh said these risks should have been fully identified by the EPA.

Mr Lewis-Jones said there was an added health risk with the transportation of harmful goods.

Mr Salter, who owns the Kingsford Timber Mitre 10, told the hearing the EPA failed to communicate with the community on issues such as contamination and long-term emissions.

He said there were significant ‘health’ risks for residents along the major transport corridors.

A spokesman for the EPA said the authority was supportive of the inquiry which would demonstrate its role in protecting the environment.

“The EPA welcomes the inquiry and the opportunity to increase public awareness and understanding of the important role it plays in protecting communities the environment of NSW,” the spokesman said.

In January last year, Botany Bay Council pushed for off-site mercury testing at the Orica site at Hillsdale.

“Botany Bay has always been a strong advocate for the health of our residents and our local environment,” Cr Keneally said.

Meanwhile, Caltex could be slugged with a maximum fine of up to \$2 million for an alleged discharge of 157,000 litres of unleaded petrol at its Banksmeadow terminal.

The NSW Environment Protection Authority (EPA) commenced a prosecution in the Land and Environment Court against Caltex Australia Petroleum for a ‘tier 1’ offence in relation to the alleged incident in July last year.

The EPA alleged Caltex was attempting to transfer unleaded petrol from a storage tank when there was a break in the hose and about 157,000 litres of petrol rapidly discharged into the surrounding area creating a large pool of petrol.

NSW Fire and Rescue workers spent about 80 minutes wading through the pool of petrol to turn off the valve.

EPA chairman and CEO Barry Buffier said the offence, if proven, could carry a penalty of up to \$2 million.

“Tier 1 offences under the protection of environment operations act 1997 are the most serious offences under legislation administered by the EPA and it requires approval from the EPA board before commencement,” Mr Buffier said.

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“This offence carries a maximum penalty of \$2 million for a corporation.”

The EPA alleged that the petrol discharge could have resulted in ignition of the petrol vapour and a consequential major fire.

A Caltex spokesman said it was disappointed with the petrol leak but did not believe its systems and processes were inadequate.

“Every incident offers opportunities for further learning and improvements,” the spokesman said.

“After a thorough investigation to establish the sequence of events and to assess the performance of Caltex’s management systems in relation to the incident, Caltex has refined some of its systems as part of this continual improvement process.”

Caltex said it undertook an extensive investigation into the leak and found there was no harm to the environment.

<http://www.eenews.net/stories/1060007532>

USA, ILL, SOUTH ROXANA

OCTOBER 24 2014.

TWO INJURED IN FLASH FIRE AT BIODIESEL PRODUCER

Two workers were injured in a flash fire atop a tank at Midwest Biodiesel Products LLC in South Roxana Thursday.

The South Roxana Fire Department received a call for a tank on fire at approximately 11:40 a.m., according to South Roxana Fire Chief Todd Werner. South Roxana, Roxana and Hartford fire departments responded to the biodiesel company, located 7350 Illinois Route 111 in South Roxana.

The workers were doing some welding repairs on top of one of the roughly 50-foot-high tanks when some ethanol inside the tank caught fire, Werner said.

“They had some workers up on top of the tank doing some repairs to the top and to the insulation on the top of the tank,” Werner said. “The tank is primarily filled with water, with just a little bit of ethanol residual on the very top. It caught fire, flashed on them.”

Steve Ory, who owns Interstate Petroleum next door to Midwest Biodiesel, said he heard and felt the boom from inside his warehouse.

“All of a sudden inside our warehouse we heard a loud explosion. It actually shook the warehouse,” Ory said. “I was pulling by right as it happened, and (there were) flames coming out of the top of the tank.”

Ory said one of his employees called 911 and he watched as some of the workers tried to fight the fire atop the tank.

“They went back up there, believe it or not, with a little bitty fire extinguisher,” Ory said. “It looked like most of the fire must have been on the outside of the tank, I’m not sure. But something blew, because you could feel it inside the warehouse.”

A ladder truck from the Wood River Fire Department was called to the scene to provide an aerial view of the tank to ensure the fire was out.

Two ambulances were also dispatched to the scene to transport injured workers to the hospital. A dispatcher described one worker as having suffered multiple lacerations. Werner said he didn’t believe either injury to be life-threatening, but no more information was provided regarding their conditions.

An official with Midwest Biodiesel Products declined to offer any comment on the incident or the workers involved.

The South Roxana Fire Department was called out to a flash fire in April of last year as well. No workers were injured in that incident, but Ory said his neighbor’s proneness for fires has him worried for his and his business’s safety.

“Hell yes it does,” Ory said. “They make diesel fuel, biodiesel. I don’t know what’s in those tanks.”

Despite having responded to the business previously, Werner said he’s seen no signs of carelessness or recklessness at the biodiesel producer.

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“They get audited regularly, they get inspected regularly. They’re a pretty by-the-book company,” Werner said.

http://www.thetelegraph.com/news/home_top-news/50549718/Two-injured-in-flash-fire-at-biodiesel-producer

USA, MO, WILLOWS SPRINGS

OCTOBER 25 2014.

COASTAL ENERGY FACES PENALTIES FOR TANK FARM NEAR ELEVEN POINT RIVER

Jack Suntrup

Serious penalties could be in store for Coastal Energy Corp., a company that the U.S. Environmental Protection Agency says operates a petroleum tank farm next to a federally protected river but has taken few precautions in case of oil spills.

Since February, the facility in Willow Springs, Mo., near the Eleven Point River in south central Missouri, has been the subject of multiple inspections and inquiries from the Missouri Department of Natural Resources and the EPA.

The EPA found that the company’s spill prevention plans were inadequate, and that in a worst-case spill scenario at the facility, tank leakage could enter the Eleven Point River, of which the federal government protects a 44-mile stretch. The company has also discharged stormwater into the Eleven Point River without first inspecting the water for contaminants.

In a Sept. 26 letter sent to Kelly Bosserman, the company’s Memphis, Tenn.-based lawyer, the EPA offered to enter negotiations with Coastal Energy over the lapses.

The letter states the company violated portions of the Missouri Clean Water Law and the federal Clean Water Act. To minimize penalties, the letter states, the company will have to prepare thorough emergency plans, construct a better barrier to contain spills, and stop discharging stormwater into the river.

If the Missouri attorney general’s office, the EPA and Coastal Energy don’t reach a resolution within 60 days, then the agency could refer the issue to the U.S. Department of Justice or file a formal complaint, the letter states.

“EPA and the state of Missouri believe that significant facility and operational improvements are needed to correct the noncompliance observed at the facility,” the letter states, “and significant penalties are warranted given the seriousness of the violations.”

Dave Bryan, a spokesman for EPA Region 7, said that Coastal Energy has agreed to enter negotiations. Bosserman could not be reached on Friday.

In a statement Friday, Coastal said it has been cooperating with the EPA and DNR, “and will continue to cooperate with the agencies to make sure that all Coastal’s plans and procedures are state-of-the-art. Under that spirit of continued cooperation, we expect to resolve any issues soon.”

Action by the EPA came after outcry from local environmentalists who said they started to worry about the facility after a January chemical spill in Charleston, W.Va., which poisoned drinking water for 300,000 people.

The terrain where the tanks are located is considered karst, which is characterized by springs, caves and sinkholes. Tom Aley, a hydrogeologist who owns Ozark Underground, a consulting firm based in Protom, Mo., told the Post-Dispatch in May that major leakage at the facility could trickle down and contaminate underground water supplies across the region.

Tom Kruzen, a Mountain View, Mo., environmentalist, has organized people against the facility’s location, and said he was pleased with the moves by the EPA. He hopes any fines or directives to clean up the facility will result in the facility closing or moving.

“I think it’s a great first step,” Kruzen said. “I’m cautiously optimistic, but it won’t be over until the facility is moved. It’s too close to the river. Anything less than removal of the tanks is not success.”

Tank and Petroleum Use Mishaps

Kruzen and Don Horton spent the summer taking displays with aerial shots of the facility to popular swimming holes and events, trying to get the word out about the Coastal Energy's potential hazards.

http://www.stltoday.com/business/local/coastal-energy-faces-penalties-for-tank-farm-near-eleven-point/article_698f545c-665e-5f05-b7c0-9a48d339df4a.html

LEBANON, BATROUN, MAR SEMAAN

OCTOBER 25 2014.

FUEL STATION FIRE GUTS PART OF BUILDING, SEVERAL VEHICLES

A huge fire erupted Friday at Tabet fuel station in the Mar Semaan neighborhood in the northern coastal town of Byblos, causing major damage and gutting four floors of an adjacent building. The fire broke out while a fuel tanker was pumping fuel into the storage of the station, which is located near Saint George church, creating bumper-to-bumper traffic in the area. Civil Defense firefighters managed to douse the blaze after hours of strenuous efforts, the National News Agency reported later on Friday. The fire "burned four floors of an adjacent building owned by Ghassan al-Aqouri in addition to the fuel tanker which sparked the blaze and a Grand Cherokee SUV that was parked on the side of the road," NNA said. It also damaged a red Mercedes as security forces, rescue crews and local authorities arrived on the scene and inspected the devastation, the agency added.

<http://www.naharnet.com/stories/en/152552-fuel-station-fire-guts-part-of-building-several-vehicles>

USA, KYK, CORBIN

OCTOBER 28 2014.

OLD FUEL TANK EXPLODES DURING WELDING

Residents of a southern Kentucky city got a surprise when an old fuel tank exploded while being cut up for scrap. West Knox Volunteer Fire and Rescue Chief Darryl Baker says no one was injured in the Monday morning blast, which happened just outside the Corbin city limits. Baker told The Times-Tribune (<http://bit.ly/1w9mRKG>) the blast shook his house. Baker says workers were cutting up an old fuel tank for scrap, but failed to remove all the fuel from the tank. The man who was cutting the tank with a welding torch was blown back from the explosion, but not injured. Fire officials said the property where the blast occurred was owned by Progressive Rail of Corbin, but is leased to an Indiana company, Three Rivers out of Fort Wayne.

<http://www.kentucky.com/2014/10/27/3504404/old-fuel-tank-explodes-during.html>

USA, N.D, KILLDEER

OCTOBER 29 2014.

POISONED BY THE SHALE? INVESTIGATIONS LEAVE QUESTIONS IN OIL TANK DEATHS

Dustin Bergsing was 21 and six weeks a father when he arrived here at Marathon Oil Corp.'s Buffalo 34-12H well pad, a square of red gravel carved into a low hill.

By dawn, he was dead.

A co-worker found him shortly after midnight, slumped below the open hatch of a tank of Bakken Shale crude oil. It was Bergsing's job to pop the hatch and record how much was inside. An autopsy found he died of "hydrocarbon poisoning due to inhalation of petroleum vapors."

An environmental engineer in Marathon's Dickinson, N.D., regional office heard about it a few days later. He'd been warning his bosses they were creating a dangerous buildup of lethal gases in their tanks. But, he said, they ignored him.

"With that excessive gas, you get lightheaded," he said in a sworn statement to the attorney for Bergsing's family, Fred Bremseth. "It would be just like carbon monoxide. You're gonna doze off, and Katy bar the doors, man -- you're dead."

Tank and Petroleum Use Mishaps

SPECIAL SERIES

An investigation of the drilling industry's worker safety record and what it means for those living amid the boom. [Click here](#) to read the series.

Bergsing died in January 2012. At least three other men have died this way during the Bakken Shale boom, found lifeless on steel catwalks, next to the hatches they'd opened to measure the bounty of the shale.

In each case, authorities at first assumed the men had been poisoned by hydrogen sulfide, or "sour gas," a well-known killer in the oil field ([EnergyWire](#), Oct. 21).

Most anyone in the oil and gas industry knows sour gas kills. Far fewer know the vaporous petroleum that collects in storage tanks can have the same effect -- a quick death.

After being told in each case that the wells didn't emit hydrogen sulfide, authorities largely dropped the idea that the deaths were caused by their jobs, which in each case involved measuring the levels of the petroleum-laden tanks.

But last month, the Occupational Safety and Health Administration fined the employer of one of the four men \$2,800, charging the company failed to train its workers in the hazards of petroleum vapors.

Zachary Buckles, 20, of Glasgow, Mont., was working for a small contractor, Black Gold Testing, in April when he was found dead with his head over a tank hatch at a Continental Resources Inc. well site south of Williston, N.D.

Eric Brooks, director of the OSHA office covering North and South Dakota, acknowledged OSHA had not taken action in similar, previous cases.

"This is novel. This is new," Brooks said. "We're looking at the next generation of hazards, and these atmospheric hazards, I believe, are one of them."

An [EnergyWire](#) investigation identified the cases of the four men -- Bergsing, Buckles, Blaine Otto and Trent Vigus -- from OSHA databases. [EnergyWire](#) then obtained hundreds of pages of OSHA reports under the Freedom of Information Act, reviewed autopsies and court filings, and interviewed experts and people who knew the men.

The documents show striking similarities between the four cases, which have each been treated differently. In some cases, the investigations show notable inconsistencies in their findings.

Robert Harrison, an occupational medicine specialist at the University of California, San Francisco, Medical Center who has investigated fatal chemical exposures in the workplace, said authorities such as coroners and medical examiners may be missing the signs of petroleum poisoning in oil field death cases.

"That's certainly something we should be checking into further and doing additional investigations on whenever deaths occur suspiciously like this in the oil fields," he said. "And I'd say dying alone in the middle of the night in North Dakota is a pretty unusual circumstance."

Cardiac contradiction

Standing at the bottom of the steps to the catwalk where Trent Vigus died, there is still a clear odor of petroleum. The beige stairs at XTO Energy Inc.'s Eugene 14X-8 well near Lambert, Mont., lead up about 20 feet to a catwalk along four tall metal tanks. Looking out from here, straight gravel roads cut through a corduroy of green and disappear across a treeless horizon. Gray paths branch off, winding a bit toward red gravel well pads.

Vigus was born and raised hours west of here, in Butte, Mont. After high school, he bounced to Washington state and back. But in 2005, a friend told him there was good money to be made along the North Dakota border, working oil rigs. By July 2010, he was 30 and had worked his way up to chief of Nabors Well Services out of Glendive, Mont.

The tank battery at Marathon's Buffalo 34-12H well pad. Dustin Bergsing died on the catwalk between the two tanks in January 2012. Photo courtesy of OSHA, obtained through the Freedom of Information Act.

He worked the overnight shift on July 9, 2010, cleaning the Eugene well. Around 3 a.m., Vigus climbed a set of steel stairs to gather readings from the top of the tall, beige tanks.

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His co-workers found him in a fetal position on the catwalk. They carried him down and frantically tried CPR in the red gravel, with no response.

The call came in to the ambulance crew as an oil worker overcome by sour gas. But the emergency room physician later ruled that out after a company safety supervisor arrived and said the well didn't have hydrogen sulfide.

Vigus' death certificate states his cause of death as "hypertensive and atherosclerotic heart disease" -- hardening of the arteries. Essentially, it says he died of hardening of the arteries and a sudden cardiac "event" from an undiagnosed heart condition. But some of the postmortem results contradict that and suggest Vigus' exposure to chemicals may have contributed to his death.

Laboratory tests turned up small amounts of propane and butane in Vigus' blood. Both these chemicals are found in Bakken crude. Other oil and gas chemicals could have gone undetected, because the test was done for recreational drug use ("glue sniffing" or "huffing") rather than exposure to industrial chemicals.

The Billings, Mont., pathologist who did the autopsy, Thomas Bennett, wrote only that the toxicology test found caffeine and nicotine, ignoring the propane and butane results.

Bennett wrote that Vigus died from a "sudden cardiac event, most probably due to his underlying enlarged heart from hypertensive cardiovascular disease."

But Bennett didn't find any hardening of the arteries in Vigus' 30-year-old body. He wrote in his description of the heart that there were "no gross atheromatous narrowings" of the arteries. That would usually mean there is no atherosclerotic heart disease.

In September 2010, a Nabors manager delivered the coroner's report to the Billings Area Office of OSHA, which promptly ended its investigation with no violations. An XTO spokeswoman referred questions to Nabors. Nabors spokesman Denny Smith said, "There was a thorough investigation by us and Nabors, and there were no claims against Nabors."

Harrison, the UCSF physician who has investigated fatal chemical exposures in the workplace, reviewed autopsy and medical information on Vigus provided by his family. He says it is possible that the officials who investigated didn't understand the potential for hydrocarbon poisoning from exposure in the oil fields.

"There was propane and butane found in Mr. Vigus' blood, and those are also chemicals in Bakken crude," Harrison said.

Reached by phone last week, Bennett acknowledged Vigus could have been killed by the hydrocarbon vapors.

"It could be," he said. "I can't rule it out."

He noted that the results from the blood tests could still be re-examined for other hydrocarbons and should be if the family has doubts.

"Back in 2010, we didn't know as much" about the dangers of petroleum vapors, Bennett said. "We're still learning how to test for these."

The postmortem results and the OSHA report never made sense to Vigus' mother, Terri Vigus of Butte. Her son never had heart problems, and he'd passed a physical in March. They were close, she said. If he was feeling ill, she thinks he would have told her.

Terri Vigus still has her son's zipped-up duffel bag in her garage in Butte. She can't bring herself to open it.

"OSHA's report was very vague," she said. "I still don't feel the closure on it."

Volatile vapors

Around the time Vigus died, on the other side of the state line in North Dakota, oil companies and government officials were contending with a new discovery: high levels of airborne petroleum blowing off well sites from crude oil storage tanks.

All crude oil has compounds called volatile hydrocarbons such as benzene, butane and propane. Bakken Shale crude has a lot more of these compounds, also called volatile organic compounds, or

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petroleum vapors, than conventional oil. It's related to why shale oil is more prone to explode in rail cars.

As early as 2009, companies and regulators in North Dakota realized that Bakken crude has more of the compounds than they'd expected, and that they were escaping from the vents in the tanks.

"They thought it was a nominal amount. It turns out it wasn't a nominal amount," said Jim Semerad of North Dakota's Department of Health.

Under the law, tanks are OK as long as they don't emit more than 100 tons per year. In most places, tanks don't even come close. But U.S. EPA records show some wells were emitting more than 2,000 tons per year.

Uncorrected, that could have meant growth in ozone and haze in the open skies of North Dakota, and the possibility of EPA sanctions for air pollution. So state officials required tanks to be fitted with devices to reduce those emissions, generally high-efficiency combustors that burn it off.

But that doesn't reduce the danger to workers.

The National Institute for Occupational Safety and Health (NIOSH) said in a posting earlier this year that "acutely toxic" levels of gases can whoosh out of the tanks and is studying whether they might have caused oil field deaths.

"Even a young guy could be knocked down," Harrison said. "Your heart could go into shock."

A separate NIOSH study released this summer found high levels of benzene and VOCs among flowback operators in Wyoming and Colorado, although the levels were not deemed lethal (*EnergyWire*, Sept. 18). There are also indications of high vapor levels farther east. In February 2013, a worker at a work site was killed when hydrocarbons from a brine tank he was emptying exploded.

People who work around crude oil tanks are taught to check the direction of the wind and stand upwind when opening the "thief hatches" on the tanks.

It is recognition of the danger, but it's haphazard compared to what worker safety experts at NIOSH recommend.

They say companies should look into providing respirators to flowback workers and truck drivers who measure the tanks. Employees shouldn't work alone around the fumes. It would be even better, they say, if workers could get tank measurements without employees opening the hatches. But many states, including North Dakota, require that the measurements be taken in person, by hand.

'Can you keep your mouth shut?'

In an extensive statement to the attorney for Dustin Bergsing's family, a former Marathon safety engineer said petroleum vapors created a "deadly" environment on top of tank batteries. [Click here](#) to read the statement.

One of the people who worked with EPA and North Dakota health officials on the issue of volatile organic compounds was a Marathon health, environment and safety specialist -- his title was "HES professional" -- who trained as a chemist. He started at Marathon in October 2011. Oddly, he said, the manager who interviewed him had asked just one question: "Can you keep your mouth shut?"

The problem turned out to be not what he said, but what he wrote, according to Bremseth, the attorney for Dustin Bergsing's family. Marathon managers were upset that he put his questions and concerns in writing in emails. Unlike a spoken conversation, those could turn up as exhibits in a lawsuit.

"They actually sent someone up to teach him how to write emails," Bremseth said in an interview. A few months after Bergsing's death, he was fired.

He had contacted Bremseth when he read a news story about the suit the Minneapolis lawyer filed against Marathon in the Bergsing case. After his [sworn statement](#), Marathon settled the federal lawsuit for an undisclosed sum that Bremseth described as "very substantial." *EnergyWire* obtained a transcript of his statement to Bremseth on the condition that he not be named.

After he started at Marathon, he told Bremseth he'd started asking about fumes coming out of the tanks at production sites. Marathon was using one flare stack instead of two on well pads, and using undersized pipes. That made wells more profitable, he said, by making initial production seem higher than it really was. But it also created a hazard by diverting more gas into the tanks.

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"It's all about the bottom dollar," he explained.

His boss, HES Supervisor Luke Franklin, made it clear he did not appreciate the emails. The specialist recalled what Franklin said shortly before Christmas in 2011: "If you write any more of those, I'm gonna have to fire you."

In a few weeks, Franklin would be at the Buffalo well site in Killdeer, shepherding the OSHA officials investigating Dustin Bergsing's death. Reached by phone, Franklin referred calls to a Marathon spokesman who did not comment.

'He was amazing'

Bergsing was born in Livingston, Mont., and lived in Edgar, outside Billings. He was, by all accounts, a good employee and, for a short time, a good father.

He had a mop of unruly hair and a fondness for bull riding. It was at the Northern Rodeo Association Championships in Billings in March 2011 that he met Lacey Breeding. They started dating the next day. Soon after, she was pregnant. They moved in together, talked about buying a house, got engaged and set a date for their wedding -- June 30, 2012. Shortly after Thanksgiving, she gave birth to a daughter, McKinley.

In September, he'd started working for Across Big Sky Flow Testing. He lived in a trailer on the site for two weeks at a time, measuring the contents of the tanks twice an hour and checking them against what truck drivers were hauling off site. It was good money. There probably aren't many jobs in rural Montana where a 21-year-old can make more than \$1,000 a week.

Company owner Steve Polesky told a workers' compensation investigator that Bergsing "was very self-motivated and was one of those guys who took pride in his job."

When he was home, Breeding said he was better with their newborn than she was.

"He was amazing," she said. "He would stay up during the night with her so that I could get some sleep. From the minute she was born, he dove right in as a father."

Death notification

It's a five-hour drive from Edgar to Watford City, N.D., a sleepy ranching outpost that has grown into a three-stoplight town clogged with tanker trucks. After Watford City, there's still miles to drive to get to the Buffalo 34-12H pad. There are lonely two-lane roads, then a dirt road that winds past flares and rangeland, through striped badland breaks to a patch of red gravel with two churning pumpjacks and two rows of tall beige tanks.

Bergsing pulled his truck up to the site in time for his shift at 2 p.m. Jan. 6, 2012, but he got a speeding ticket doing it.

That night, he was alone in his trailer texting back and forth with his fiancée. The last text, around 9:30 p.m., was about the ticket.

At 1 a.m., a tank alarm went off at a Marathon facility, indicating a tank was getting too full. Marathon called Polesky, who dispatched an employee to see what was wrong.

Jim Kime probably figured Bergsing had fallen asleep in his trailer and deserved a good chewing out. He switched the tank at the site and went up on the catwalk. When he saw Bergsing's body, he checked for hydrogen sulfide, but there wasn't any.

Breeding had stayed up all night since the last text at 9:30. McKenzie County Sheriff's Deputy Derrek Harju called her about 4:15 a.m.

"The sheriff called me and asked me for Dustin's parents' contact information, and he wouldn't tell me why," Breeding testified last year. "And he told me that I was the only contact listed, and asked my relationship to Dustin. I told him I was his fiancée. And he told me that in that case, I should know that Dustin succumbed to H2S poisoning, gas poisoning, and that I should call the nearest friend or family to come be with me."

'It looks like he suffocated'

A few days later, late at night, the Marathon HES professional got a call from a co-worker asking if he'd heard about the death at a well site. He hadn't.

"He said, 'I walked up, and the guy was leaning up against the post up on the tank battery,'" he

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recalled. "And, you know, it looks like he suffocated."

He and some of his co-workers were puzzled by a newspaper article in which the local sheriff said he'd already ruled out inhalation of gas fumes as a cause of death, before there were autopsy results.

"There's not a shadow of a doubt in my mind," he said in the statement, "that if they were doing things right, and correctly and safely they could have prevented his death."

Marathon didn't make any changes after Bergsing died, he said. But in May, another young man nearly passed out at another well near Manning, south of where Bergsing died. Along with some co-workers, the HES professional took monitoring equipment out to the well, the Ernest Charchenko 14-33H.

"We're talking the -- the oxygen content was below breathable," he said. "It had displaced the oxygen around the tanks. It was almost deadly. It was deadly."

After that, he said, the company started providing respirators to people at well sites.

He was fired in June 2012, he said, when he wrote a warning that conditions were so dry, well site flares could start a prairie fire.

OSHA investigators decided not to fine Bergsing's employer, Across Big Sky Testing, after noting there was no indication of hydrogen sulfide poisoning.

But the state workers' compensation agency, called N.D. Workforce Safety & Insurance, approved a claim for Bergsing's daughter to receive death benefits.

Across Big Sky, though, is fighting the claim in court. In paperwork challenging the decision, Polesky's wife, Leann Polesky, wrote that Bergsing may have died as a result of "self-induced inhalation." The allegation is that Bergsing was "huffing" -- intentionally breathing in the fumes to get high.

A hearing examiner found "no actual evidence" Bergsing intentionally inhaled the toxic fumes and ruled against the company. Still, Across Big Sky is taking the case to the North Dakota Supreme Court, which is set to hear arguments in the case Nov. 26.

OSHA levies fine

Marathon may have started providing respirators at its well sites. But Blaine Otto wasn't wearing one when he died.

Otto, 40, drove a truck for Falco Energy Transportation. He was found slumped over a catwalk railing in July 2013 at a Newfield Exploration Co. well site in the Little Missouri National Grassland outside Keene, N.D. His face was next to a tank hatch. His eyes were open, but he wasn't breathing. Next to him were his tools for measuring and sampling the tank.

North Dakota State Forensic Examiner William Massello says determining whether a death is work-related is not the exact science that many people want it to be. Photo courtesy of the North Dakota Department of Health.

OSHA records indicate Otto's death was initially attributed to hydrogen sulfide.

But North Dakota State Forensic Examiner William Massello ruled out hydrogen sulfide. Instead, he said Otto died of "cardiac arrhythmia" and said it was from natural causes. A claim for workers' compensation benefits in Otto's death was denied.

Cardiac arrhythmia can be caused by inhaling hydrocarbon vapors. Massello himself pointed that out when he testified about Bergsing's death in the workers' compensation case.

"It can sensitize the heart to the effects of adrenaline and you can get what we call fatal arrhythmias from this," Massello said in the 2013 deposition.

After Otto's death, OSHA sent Falco a letter saying its employees should be given "four-gas meters," to warn them of dangerous vapors such as hydrogen sulfide or hydrocarbons. Brooks of OSHA said such a "hazard awareness letter" can be used in the future to show a company knew what needed to be done to protect employees.

But OSHA didn't fine the company. The inspector's notes say no hydrogen sulfide or hydrocarbons were found in the autopsy. Without a witness or physical evidence, OSHA inspectors determined they couldn't issue a citation.

A family member said the family has hired an attorney but wouldn't discuss the case. Newfield

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referred questions to Falco, which didn't respond to messages.

Zachary Buckles was found on a catwalk at a Continental Resources Inc. well site near Williston with a sweeping view of the Missouri River.

The McKenzie County Sheriff's Department originally reported that because Buckles, a flowback operator, was found over the open cover of a crude oil tank, "it is believed that he died as a result of [hydrogen sulfide] gas exposure."

But, as with Otto, Massello, the state forensic examiner, listed the cause of death as cardiac arrhythmia ([EnergyWire](#), July 8).

In Buckles' case, inhalation of "petroleum vapor exposure" was listed on the state death report among "other significant conditions" along with obesity. Rather than "natural causes," the manner of death is listed as "undetermined."

Attempts to reach Buckles' family members were unsuccessful. But the obituary they published in *The Glasgow Courier* said he died from a "work-related accident."

A spokeswoman for Continental Resources said the company "is not aware of any dangers from hydrocarbon vapors or VOCs at any of our locations."

But OSHA now says hydrocarbon vapors were a danger at Continental's well. It decided to fine Buckles' employer, Black Gold Testing, saying the company didn't prepare him for those dangers. The company has gone out of business, OSHA officials said, but agreed to pay the \$2,800 fine.

Brooks, who signed off on the citations, said the citation reflected growing questions and new concerns about the dangers of tank fumes.

"When you have a combination of factors that might relate to a death, it can be challenging to lean it back to one event," he said. But "I think everyone can agree employees that are engaged in tank gauging operations have the potential to be exposed to lethal atmospheric hazards."

'That's a good question'

In saying it knows of no dangers from vapors at its wells, Continental Resources also noted the state forensic examiner's classification of Buckles' death as cardiac arrhythmia.

But in an interview, Massello said determining whether a death is work-related is not the exact science many people want it to be.

"We get deaths in the oil field from hydrogen sulfide, and the vaporized alkane, hydrocarbon vapors," Massello said. "Sometimes we're not sure whether that played any role in the person's death or not, so we check off 'no.'"

He said he knows of ongoing studies of the volatile compounds and the levels that have been established as toxic.

"They're questioning whether the levels are really valid," he said. "And you know, that's a good question."

A key issue, he said, is that the airborne compounds can affect different people in different ways.

"One person might not even experience any effects, whereas other people might experience a fatal cardiac arrhythmia as a result of this and drop dead," Massello said.

'Nobody's got any data'

If the fumes from a tank can kill in an instant, public health experts say it signals risks for the people who live nearby.

These are not drilling sites or frack jobs where a rig arrives, does its work for a few weeks and leaves. These tanks will be in place until the wells tied to them have drained all the possible oil from the Bakken formation, likely for years. Most are out on the prairie where there are more cattle than people, but some are in the middle of North Dakota's scattered population centers.

For example, there's Williston, the hub of the Bakken boom. On the city's western edge, there's a 36-tank battery across the street from new housing developments where little girls in pink neon ride bicycles down white concrete streets. What effect are the tank emissions having on them?

"Great question," said professor John Adgate of the Colorado School of Public Health. "Nobody's

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got any data."

Adgate this year co-authored a review of public health risks from oil and gas sites that noted emissions from well sites likely pose risks for those who live nearby.

The best information so far, he said, comes from the NIOSH study showing workers' exposure to concerning levels of benzene and other VOCs.

"How that relates to those tanks as an emissions source is the next obvious question," he said.

NIOSH officials, though, caution that their research isn't intended to provide information about exposure to the general population ([EnergyWire](#), Oct. 23).

Wilma Subra, a Louisiana environmental scientist who monitors the oil and gas industry, said NIOSH is wrong to play down the importance of its findings to the people who live amid the oil patch.

"If the emissions are bad enough to cause death," Subra said, "they have to be causing severe health impacts."

[Click here](#) to read the safety engineer's sworn statement.

<http://www.eenews.net/stories/1060007896>

CANADA, ALBA, CALGARY

OCTOBER 30 2014.

AIRBORNE FUEL TANK LANDS ON MAN FOLLOWING DOVER EXPLOSION

A mangled diesel tank following an afternoon explosion in Dover A 62-year-old man is lucky to be alive following an afternoon explosion in the southeast. The unidentified man was working on a diesel slip tank near a home in the 330 block of Doverthorn Rd. S.E., in the community of Dover, when the tank exploded. The experienced boilermaker was welding a new fitting on when it blew, sending the heavy steel tank more than 6 metres in the air. The tank came back down and landed on him. According to one witness, the man was transported to hospital with an apparent broken hip. The witness said the boilermarker had taken proper safety precautions and filled the tank with water to replace any remaining fuel. An investigation into the incident is underway.

<http://calgary.ctvnews.ca/airborne-fuel-tank-lands-on-man-following-dover-explosion-1.2077849>

USA, WYO, LARAMIE CO, CHEYENNE

NOVEMBER 1 2014.

OIL RECYCLING PLANT EXPLOSION KILLS ONE

An industrial accident on Thursday afternoon west of Cheyenne left one man dead.

A fuel tank at the Tri-State Oil Reclaimers plant on Otto Road exploded shortly after 10:30 AM while an employee was doing maintenance on the tank.

"My bed shook and I heard a boom," said Sarah Martin. She lives on the Tri-State property with her parents who manage the plant, "I knew right away it wasn't good."

More than 10 emergency agencies and 30 responders including multiple Laramie County Fire Districts, Wyoming Air National Guard, and Cheyenne Fire and Rescue were at the scene within 15 minutes.

Manny Muzquiz, Operations Chief for Laramie County Fire District 2 said crews had to wait until the Air National Guard arrived with their aircraft crash fire fighting trucks to come before attempting to put out the fire. "You can't put out fuel fires with water, you have to have foam and the trucks you see around town have 50 to 90 gallons of foam, the big trucks from the base have hundreds of gallons," he said, "we don't start trying to put out a fire until we've assessed it and know we have the right equipment to put it out."

Tri-State employee Ruth Carpenter said she's worked at the plant for 10 years and had never seen anything like it.

Clay Long said it had been a hard day for the plant and it's employees. "We are shocked and devastated," said Long, "we are absolutely cooperating with all the compliance agencies on the investigation."

The Occupational Health and Safety Agency (OSHA) was on the scene by 1:00 PM investigating the

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incident.

The name of the deceased worker hadn't been released by Thursday night.

<http://www.kgwn.tv/home/headlines/Oil-Recycling-Plant-Explosion-Kills-One-281026242.html>

CANADA, B.C, SAANICH

'NOVEMBER 1 2014.

OIL-TANK LEAK BLAMED FOR SPILL THAT REACHED BLENKINSOP

An oil spill that entered Blenkinsop Creek has been contained and is not expected to affect the nearby Swan Lake Christmas Hill Nature Sanctuary.

"Work is ongoing, but they've isolated it, which is the main thing," said Adriane Pollard, manager of environmental services for Saanich. "It came from one house, a leaking oil tank."

Saanich was alerted to the leak on Wednesday morning. Rain carried the oil into a perimeter drain, which, in turn, entered the municipal storm drain and then the creek.

Public-works crews have excavated enough to stop the flow of oil at the property line and the tank has been emptied, Pollard said.

An estimated 300 litres of oil escaped from a tank on Taine Place in what is believed to have been a slow leak. Not all of the oil reached the creek.

A boom was put in the creek Wednesday to keep the spill from spreading.

<http://www.timescolonist.com/oil-tank-leak-blamed-for-spill-that-reached-blenkinsop-creek-1.1489622#sthash.AEtNpwkt.dpuf>

USA, ID, DIETRICH

NOVEMBER 1 2014.

OIL SPILL IN DIETRICH CANAL CONTAINED

A hydraulic oil and gasoline spill occurred at a hydroelectric plant on the Gooding-Milner canal south of Dietrich on Thursday. About 45 to 75 gallons of hydraulic oil and 5 gallons of gasoline were spilled into the canal near the plant, said Lincoln County Sheriff Kevin Ellis. Workers at the plant called his department about 3:30 p.m. A mechanical failure caused the spill of oil being stored between the turbine and the warehouse, Ellis said. "The volume of water that came through diluted the oil to the point that the EPA (Environmental Protection Agency) scheduled it at a Schedule 1 spill, which is very minor," he said. A "sock" of absorbent material soaked up oil floating on the water's surface. Ellis said the EPA signed off on the containment during a 6:30 p.m. conference call Thursday. Minor mop-ups were done early Friday.

http://magicvalley.com/news/local/oil-spill-in-dietrich-canal-contained/article_99db0641-0a9c-556f-bad3-7d058646373b.html

USA, N.Y, WEST GHENT

NOVEMBER 1 2014.

DEC RESPONDS TO 7,000 GALLON PETROLEUM SPILL

The Department of Environmental Conservation is investigating a petroleum oil spill of about 7,000 gallons along Route 9H. The spill happened early Friday morning. DEC Director of Media Relations Tom Mailey said the spill was reported at about 6:30 a.m. Friday and was a result of fuel being sent to the wrong tank at the First Fuels facility at 1840 Route 9H in Columbia County. Some of the fuel moved into the secondary containment area and an adjacent pond, Mailey said. A boom was placed in the pond to contain the petroleum and cleanup procedures are continuing into the weekend, he said.

<http://www.timesunion.com/local/article/DEC-responds-to-7-000-gallon-petroleum-spill-5861111>.

Tank and Petroleum Use Mishaps

**USA, WYO, CHEYENNE
NOVEMBER 5 2014.**

MAN KILLED IN FUEL TANK EXPLOSION IS IDENTIFIED

The man killed in an oil tank explosion west of Cheyenne last week has been identified as 52-year-old Elmer Loman.

The explosion happened at about 10:30 a.m. Thursday at Tri-State Oil Reclaimers Inc. on Otto Road, about seven miles west of Cheyenne.

Loman, a Tri-State employee, was welding on an elevated catwalk attached to a tank "that was storing used oil when the explosion occurred," Hayley McKee said in an email.

McKee is a spokesman for the Wyoming Occupational Safety and Health Administration.

Fellow Tri-State employee Michael Pierce witnessed Loman's death and suffered minor injuries in the blast. He was treated at Cheyenne Regional Medical Center and released Thursday afternoon.

A specific cause for the explosion has yet to be determined.

Because the explosion involved a workplace accident rather than criminal activity, the Laramie County Sheriff's Department has turned the investigation over to OSHA.

"As far as we are concerned, we are pretty much out of it," sheriff's department spokeswoman Capt. Linda Gesell said of the investigation.

McKee said federal guidelines mandate that OSHA investigations be completed within 180 days of an incident.

Tri-State owner Charles Welty released a statement to the Wyoming Tribune Eagle on Monday on behalf of the company and its employees:

"All of us at Tri-State Oil Reclaimers Inc. are deeply saddened by the loss of our dear friend and fellow worker, Elmer Loman.

"In the 31 years we have been doing (oil and fuel) recycling in the tri-state area, this is the first time that anything like this has happened. We are anxious to work with all of our regulators to ensure ... something like this never happens again.

"Our family of workers wishes to express our deepest condolences for all of the loved ones who mourn Elmer's passing."

Little is known at this time about Loman's life.

Gesell said there are indications that he may have family in Moorcroft, Wyoming, which is about 30 miles east of Gillette.

Co-workers at Tri-State described Loman as "a really good man" and a "hard worker" who loved snowmobiles and motorcycles.

Funeral services for Loman are planned for 10 a.m. Thursday at Gillette Memorial Chapel in Gillette.
http://www.wyomingnews.com/articles/2014/11/04/news/20local_11-04-14.txt#.VFmCSfmUdu4

USA, TX, HARRIS CO, NOVEMBER 5 2014. PROPANE EXPLOSION SENDS ONE TO HOSPITAL >> CIGARETTE LIGHTER SPARKS FLASH FIRE AT ROOFING COMPANY

The blast occurred about 7 a.m. at Amtex Roofing at 1360 Hugh Road near Trickey Road, according to the Harris County Sheriff's Office. Deputies said the man, whose name has not been released, was flown by LifeFlight medical helicopter to Memorial Hermann-The Texas Medical Center. Details of his injuries and condition were not released. No other injuries were reported. The man apparently was using a cigarette lighter to look at the level of tar inside a storage tank when the fumes ignited, said Lt. Dean Hensley, of the Harris County Fire Marshal's Office. A brief flash fire was sparked. The tank was on a flatbed truck.

<http://www.chron.com/houston/article/Propane-blast-injures-man-in-N-Harris-Co-5866129.php>

Tank and Petroleum Use Mishaps

**USA, MI, LAPEER
NOVEMBER 7 2014.**

DEADLY LAPEER EXPLOSION CAUSED BY PROTOTYPE GAS TANK FAILURE, STATE AGENCY SAYS

Gary Ridley

A preliminary investigation has revealed that the victims of a fatal Lapeer machine shop explosion were testing a prototype fuel tank at the time of the incident.

The Michigan Occupational Safety and Health Administration released information Wednesday, Nov. 5, showing that 34-year-old Bradley Davis, of Millington, died when a prototype fuel tank failed a pressure test and exploded.

Emergency crews were dispatched around 2 p.m. Tuesday, Nov. 4, to Lapeer Industries, 400 McCormick Drive, after an explosion was reported behind the business. Davis was killed and three others were injured in the blast.

MIOSHA reports that two people injured in the explosion were employees. A customer was the third person injured in the blast.

All three people were hospitalized for their injuries. Police have not released their status.

Nicole Davis, Bradley Davis' wife, said the two married 15 years ago and just recently celebrated their anniversary in October. The two graduated from Millington High School in 1998.

"He was a good man," Nicole Davis said of her husband. "He died doing what he was good at: providing for his family."

He worked at Lapeer Industries for the past five years.

Alan Przekora, chief financial officer of Lapeer Industries, said the company offered its condolences to all the victims involved and is fully compliant with the ongoing investigation. He declined to comment further due to the investigation.

The company manufactures materials for automotive and military uses.

Davis was the 32nd person in the state this year to die while on the job, according to MIOSHA.
http://www.mlive.com/news/flint/index.ssf/2014/11/prototype_gas_tank_failure_led.html

**SRI LANKA, HAMBANTOTA
NOVEMBER 9 2014.**

HAMBANTOTA FUEL STORAGE FACILITY DEFECTS

The UNP parliamentarian Ravi Karunanayake raised the issue of the Hambantota Port SLPA Aviation Fuel Tank farm site in parliament last Friday subsequent to the visit to the site by a group of UNP members on the July 10, 2014.

He revealed some of the observations on the prevailing condition of the facility, before taking over by the CPC. According to the report, continuous ground settlements in excess of more than 400 mm have been observed at locations where piling has not been done. The UNP team observed defects due to continuous ground settlement will continue to grow, until a permanent solution for the ground settling is identified through a consultant and implemented. They strongly emphasized that this Aviation fuel storage tank farm constructed by the SLPA is far below the acceptable industry standards and even by physical appearance.

It is a fact that any Aviation fuel storage and handling facility conform to the most stringent requirements of JIG, API, NFPA and other international standards due to the most critical nature of this industry, which has not been adopted in the design and construction of this facility.

Karunanayake said that a typical example of a dislocated pipe support at the Hambantota Aviation tank farm was seen on July 10, 2014 by them, due to continuous ground settlement. He said that temporary arrangements have been made by the SLPA/Contractor in the past on several occasions by increasing the height of the concrete support and using metal plates. However a small gap is still visible due to subsequent settlements. The team had also observed that the pipelines are hanging on to the tank nozzle and shell, over stressing the piping and tank shell, which will have severe consequences in the long run paving the way

Tank and Petroleum Use Mishaps

for a catastrophic failure.

The team had also observed that after a detail assessment and evaluation, the total facility constructed by the SLPA is not in a suitable condition for the usage by CPC for the storage and handling for JetA1 without finding proper and permanent remedies to the continuous ground settlement and defects present at every location in the facility as clearly shown by photographic evidence taken by them during their visit to the facility. Karunanayake said that the CPC will never be able to obtain JIG approval and concurrence to operate this facility for Jet A1 as an intermediate storage terminal in the future, without proper rectification which is doubtful.

“However in the meeting it was mentioned that the SLPA will hand over this sub standard Jet A1 import and storage facility at the Hambantota port to the CPC in the near future in the same condition. We have been highly embarrassed as professional Engineers who have successfully completed the Aviation Refueling Terminal at the MRIA, to be a World class facility and a valuable asset for the CPC, by assigning the responsibility to make assessment and recommendations for a facility nowhere comparable to the CPC constructed facility,” he added.

Karunanayake further stated that it was mentioned in the meeting by SLPA, that as per the agreement with the contractor, all the defects will be rectified by the contractor before the 18th of July 2014 except for implementing a permanent solution to the ground settling problem. “However as per our observations it is not possible to rectify all the defects within such a short period and also without solving the ground settling issue which contributes for most of the defects.

There is no point in repairing it as it will only be a temporary solution. It was also mentioned in the meeting that the contractor has been given until the end of November 2014 to find and implement a permanent solution to the continuous ground settling problem. However the SLPA representative stated that an assurance cannot be given to the CPC that ground settling will not continue after that.”

He said that the CPC suggested to monitor the ground settlement until November 2014, weekly with 20 reference points to see the level of settlement. SLPA agreed to this and the CPC agreed to inspect and get the readings with SLPA.

Meanwhile the CPC officials informed that the soil layer underneath the concrete may have been washed away as the man hole within the yard had sunk. Therefore the CPC suggested to perform a load test at the site, to which the SLPA agreed.

Since the Hambantota port has been constructed at a strategic location close to international shipping routes, to have a properly built and operated Jet A1 storage facility conforming to international standards is very advantages economically consistent with refueling operations at the Mattala Rajapaksa International Airport.

“We sincerely believe that SLPA should take immediate action to find a permanent solutions to the prevailing conditions. We forwarded our observations with pictures as proof with our sincere engineering comments, for the consideration by the Management of the CPC when taking a decision for taking over of this facility by CPC for operation in the future,” said Karunanayake.

<http://www.thesundayleader.lk/2014/11/09/hambantota-fuel-storage-facility-defects/>