

Unusual Floods and Drownings

Please reference this document as:

Kelman, I. 2017. Unusual Floods and Drownings. Version 9, 24 October 2017 (Version 1 was 29 December 2002). Downloaded from <http://www.ilankelman.org/disasterdeaths/UnusualDrownings.pdf>

Purpose:

Floods and drownings involving fluids other than water are compiled here. The emphasis is on unusual and rare events to illustrate the variety of hazards which occur and the variety of incidents which emergency service and health care workers face. For example, lahars, debris flows, and other hazards at the interface between solids and liquids kill many people annually while electrocution is a common cause of death in floods. These incidents are not compiled here.

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Commentary: Accuracy, relevance, and sensitivity

Some incidents listed here are from media sources and some of the URLs will likely have disappeared due to the high rate of webpage turnover on media sites. Sometimes, the apparently assumed-to-be humorous aspects are highlighted in the articles, but people died or experienced injury in some events. There is still terrible grief and sadness, especially knowing that most of the casualties were preventable.

As well as putting those directly affected in danger, any such situations could put potential rescuers and health care workers in danger. These incidents are useful for noting the types of rescues and dangers which the emergency service and health care sectors face.

Commentary: Terminology

These incidents are often reported as “drownings”, even though water was not necessarily involved. The cause of death in such circumstances, including those in water, tends to be asphyxiation or suffocation, terms which effectively refer to a lack of oxygen, even if resulting from physical trauma and/or loss of consciousness. The Oxford English Dictionary (<http://dictionary.oed.com/cgi/entry/00070196> on 29 December 2002) defines “drown” as “To suffer death by submersion in water; to perish by suffocation under water (or other liquid)”. Therefore, as long as death occurred in a liquid, such as wine or melted wax, the term “drowning” appears to be correct. As well, some of the deaths could involve burns or poison, even if asphyxiation or suffocation would have occurred as well.

Many classifications exist for defining fluids and flows through rheology (the study of the flow and deformation of matter). Examples of common variables used to define flows are:

- Sediment concentration:
 - by weight or by volume
 - as a percentage of the entire flow or compared to the water content.
- Bulk density (mass divided by volume).

These variables are interrelated and different forces keep the mixture cohesive, depending on the flow type. Viscosity (stickiness or ability to flow) and turbidity (how dirty a fluid is) may be used too as part of the fluid or flow definition. Terms such as “water flood”, “hyperconcentrated flow”, “loess flow”, “debris torrent”, “lahar”, and “debris flow” are also used. Many of the cases fall midway between true liquids and solids.

Beer

James, W.R. 1966. "A case of drowning in a vat of beer and two other short case reports". Medicine, Science, and the Law, vol. 6, no. 3, pp. 164-165.

The London Beer Flood in October 1814 along Tottenham Court Road to St Giles
From <http://www.bbc.co.uk/dna/place-london/plain/A42129876> on 1 September 2014

The London Beer Flood of 1814

Tottenham Court Road Awash

24 October 2008

Come October of 1814, the beer had been fermenting atop the brewery for months (as was the need with porter), and the metal and wood of this huge vat was, unbeknownst to the majority of the brewery workers³, beginning to show the strain of holding back the thousands of litres. Suddenly, at about 6.00pm, one of the heavy metal hoops snapped and the contents of the porter vat exploded out - quite literally - causing a chain reaction with the surrounding vats. The resulting noise was apparently heard as far away as five miles!

A total of 1,224,000 litres of beer under pressure smashed through the twenty-five foot high brick wall of the building, and gushed out into the surrounding area - the slum of St Giles. Many people lived in crowded conditions here, and some were caught by the waves of beer completely unaware. The torrent flooded through houses, demolishing two in its wake, and the nearby Tavistock Arms pub in Great Russell Street suffered too, its 14-year-old barmaid Eleanor Cooper buried under the rubble. The Times reported on 19 October of the flood:

The bursting of the brew-house walls, and the fall of heavy timber, materially contributed to aggravate the mischief, by forcing the roofs and walls of the adjoining houses.

Fearful that all the beer should go to waste, though, hundreds of people ran outside carrying pots, pans, and kettles to scoop it up - while some simply stooped low and lapped at the liquid washing through the streets. However, the tide was too strong for many, and as injured people began arriving at the nearby Middlesex Hospital there was almost a riot as other patients demanded to know why they weren't being supplied with beer too - they could smell it on the flood survivors, and were insistent that they were missing out on a party! Calm was quickly restored at the hospital, but out in the streets was a different matter.

Bitumen

Singh, B. 1982. "A case report of 'drowning' in a bitumen tank". Medicine, Science, and the Law, vol. 22, no. 1, pp. 51-52.

Canola Seed

<http://www.msn.com/en-ca/news/canada/2-girls-dead-1-critical-after-being-submerged-in-canola/ar-AAfqNjp>

Canola seed incident that killed 2 girls claims life of 3rd sister

2015-10-14

A third girl has died after she and her two sisters were buried by canola seed while playing in the back of a truck in central Alberta last evening.

According to RCMP, the girls, ages 11 to 13, were buried and smothered by the seed in Withrow.

The last sister who died was taken to Stollery Children's Hospital in Edmonton with critical injuries. The two other girls were pronounced dead at the scene.

Caramel

<http://metro.co.uk/2017/10/24/mum-boiled-alive-when-tank-she-was-cleaning-filled-with-caramel-7023043>

Mum boiled alive when tank she was cleaning 'filled with caramel'

A woman died this week after molten caramel allegedly gushed into a tank that she was cleaning in a factory.

Natalia Nemets was killed during the incident at Sary Oskol, in the Belgorod region of Russia.

She was reportedly 'boiled alive' by the liquid.

Chicken Slurry

[http://www.telegraph.co.uk/news/main.jhtml?](http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2004/07/13/nagri13.xml&sSheet=/news/2004/07/13/ixhome.html)

[xml=/news/2004/07/13/nagri13.xml&sSheet=/news/2004/07/13/ixhome.html](http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2004/07/13/nagri13.xml&sSheet=/news/2004/07/13/ixhome.html) on 13 July 2004

Three drown in farm slurry tank

By Chris Boffey

(Filed: 13/07/2004)

Three agricultural workers died yesterday after being overcome by fumes from a slurry tank and drowning in three feet of concentrated chicken waste.

The men had just started work when one of them fell unconscious into the mobile storage tank after opening a hatch.

Two colleagues tried to pull him out but they, too, were affected by the poisonous gas seeping from the four tons of liquid, and also slipped in.

A fourth man went into the tank in an attempt to help his three colleagues but experienced breathing problems before clambering out.

The labourer, 29, raised the alarm on his mobile telephone and called the emergency services to the lorry at Great Hockham, Norfolk.

Fire crews from Thetford, Watton and East Harling used breathing apparatus to get into the 12ft-high container and recover the bodies of the men, who were lying face down in the liquid sludge.

Ambulance crew treated the surviving worker and he was taken to the Norfolk and Norwich Hospital.

The three dead men all worked for Enviro-Waste of Thetford, which recycles and transports agricultural waste.

The Government's Health and Safety Executive has begun an investigation into the deaths, recognising that the main hazards with slurry storage are gas emissions.

Carbon monoxide, ammonia, methane and hydrogen sulphide are all produced by bacterial decomposition of slurry, creating a deficiency of oxygen. The HSE says that hydrogen sulphide is particularly toxic.

Enviro-Waste, which has operated since 1991 and is based in Thetford, offers a 24-hour-a-day service transporting and recycling sludge from farms for spreading on fields.

A spokesman for the firm said last night: "We wish to offer our deepest sympathy to all of the families concerned with the tragic events earlier today. The loss of three highly valued members of our small staff has both shocked and saddened all of us. An investigation is under way regarding the circumstances of the events and we will be co-operating fully with the Health and Safety Executive."

Chris Carrington, a spokesman for the National Farmers Union, said: "The fumes from slurry in enclosed spaces are known to be very hazardous.

"The health and safety guidelines are that any container of waste has to be completely empty before anyone goes in it because the gases are that bad. It is also a rule that if anyone does go in then nobody is supposed to follow."

Chocolate

http://www.news24.com/contentDisplay/level4Article/0,1113,2_1218507,00.html on 15 August 2002

Man drowns in chocolate

24 July 2002 13:31 - (SA)

Hatfield, Pennsylvania - A sweet factory worker died after being submerged in a 4,542 litres vat of liquefied chocolate, police said.

Yoni Cordon (19) of Philadelphia, was discovered in the vat by co-workers at the Kargher Corporation on Tuesday, authorities said.

Police said they believe Cordon had been working on a platform near the opening of the vat, which is used for mixing and melting chocolate.

Nobody saw Cordon fall and it was unknown how long he was submerged before he was found, Hatfield Township police detective Patrick M Hanrahan said.

Hanrahan said foul play was not suspected and the death was being investigated as an accident.

- Sapa-AP

<http://news.bbc.co.uk/2/hi/americas/5264566.stm>

US man survives chocolate ordeal

Last Updated: Friday, 18 August 2006, 16:53 GMT 17:53 UK

A 21-year-old US man ended up in hospital after spending two hours trapped in a vat of chocolate, police in Wisconsin said on Friday. The man said he had climbed into the tank before becoming trapped waist-deep in chocolate, police chief Randy Berner told AP news agency.

However, other reports suggest he was stirring the chocolate when he fell in.

Rescue workers and staff at the Debelis Corporation used cocoa-butter to thin out the chocolate and pull him free.

"It was pretty thick. It was virtually like quicksand," Captain Berner said.

"It's the first time I've ever heard of anything like this," he added.

The worker said his ankles were sore after the incident, and he was taken to a local hospital where he is recovering.

The accident involved dark chocolate.

<http://www.bbc.co.uk/news/magazine-32119449>

I nearly drowned in chocolate

31 March 2015

From a ramshackle camp in the woods outside Calais, a Syrian refugee made his 18th attempt to stow away in a lorry bound for the UK. Here he tells how he ended up in a tank of melted chocolate - an experience that almost killed him.

We met the migrant smuggler at the petrol garage at 2am. The lorries going to the UK were always parked there, near the train station. We usually tried to sneak on board at night, when the drivers were asleep and there weren't so many police around.

There were 25 of us in all, so he split us into groups. Each group was going to sneak on to a different lorry.

The smuggler chose seven of the tallest people. Five of us were Syrian, and there were two Egyptian guys as well. At 25, I was the youngest. The others were all in their mid-30s.

We knew that our lorry was going to the UK because the smuggler had seen a card that gets posted on the lorries when they come into the waiting area. He's a Kurdish guy from Iraq and has been doing this for years. I left Syria with nothing, so I'd been working for him in Calais almost two months to pay my way. He said that these lorries, the ones that carry liquids, go straight on to the train without getting X-rayed.

The driver was still asleep in the cab, so we had to climb up on to the tank quietly. The hatch on top was locked, but the smuggler cut the wires.

We had no idea what was in there, but as soon as he opened it the smell hit us. It was chocolate. We were going to sneak into the UK in a heated tank of liquid chocolate.

It was a freezing night outside, and when we first climbed down into the warm chocolate it was a really good feeling. After about 15 minutes, though, the heat started to get uncomfortable.

I'm about 185cm tall (6ft 1in) but I couldn't touch the bottom of the tank. We were all holding on to the rim of the hatch with one hand and resting the other on the next man's shoulder. If anyone had lost their grip and gone under, we'd never have been able to get to him out. And so we clung on like that in a circle, submerged in chocolate right up to our necks. The smuggler closed the hatch, leaving a little gap so we could breathe.

The heat was terrible. We had to keep moving our legs to keep from getting totally trapped in the chocolate.

But we stuck it out, hoping the truck would move. It was only a 20-or-30-minute drive to the train, and once we'd passed the checks we'd be able to get out.

But the truck didn't move. We stayed in there for more than two hours. There was nothing to say. We just cursed Bashar al-Assad for putting us in this situation.

In the end, the others started to say that it was too hot, that we had to get out. I wanted to stay. If any one of us left, there'd be chocolate all down the side of the truck and we'd all get caught.

One or two of the guys - big men, older than me - started to cry. In the end we all agreed to leave.

The chocolate was so sticky it took six or seven of us to help each man climb out. The first guy pushed open the hatch and pulled himself up while the rest of us shoved from below.

The last guy struggled most because there was no one to push him up. We were all pulling, but he was getting sucked back down by the chocolate. He had to kick his shoes off to get out. They got left behind.

It was a long walk back to our tent in the woods, and we were covered in chocolate from head to toe - our hands, our hair, our eyes - it was everywhere. It was good chocolate, though. We were still licking at it on the way home. You could see our footprints stretching out on the road behind us.

The narrator of this story eventually got into the UK on a trailer loaded with new lorry cabs. He tried the doors on all these cabs until he found one that was open and hid inside. He has been granted asylum and is now working in an Arabic restaurant in Sheffield.

He told his story to Daniel Silas Adamson and Mamdouh Akbiek of the BBC World Service. Animation by Philippe Cooke. Explore more stories from Syrian refugees.

Drilling Fluid and Oily Seawater

Fromm, R.E. 1991. "Hypercalcemia Complicating an Industrial Near Drowning". Annals of Emergency Medicine, vol. 20, no. 6, pp. 669-671.

Fat/Tallow

<http://www.stuff.co.nz/national/6156220/Fat-spill-closes-Kaimai-road>

Fat spill closes Kaimai road

Michael Daly

Last updated 11:10 17/12/2011

State Highway 29 across the Kaimai Ranges has been closed after a truck left a trail of tallow along the road.

Tauranga police Senior Sergeant Rob Glencross said the road surface was extremely slippery and vehicles could no longer use it safely.

Crews were working to clean the road but police could not say when it would reopen.

The closure is between Poripori Rd on the Tauranga side and Raparapa Rd on the Matamata side. The only alternative routes available are through Waihi, State Highway 2 through Te Puke to Rotorua, or State Highway 36 through Pyes Pa to Rotorua.

Fermentation Tank

Pedersen, M.B. and J. Simonsen. 1982. "Accidental death in fermentation tanks: report of two cases". Medicine, Science, and the Law, vol. 22, no. 4, pp. 283-284.

Gasoline

Apic, R., Z. Gašparec, and K. Weber. 1976. "Drowning in Gasoline". Forensic Science, vol. 7, no. 3, p. 181.

First paragraph of the article:

Two cases of accidental death are presented. The first caused by drowning in gasoline, and the second caused by intoxication due to inhalation of the gasoline vapour and droplets. The accident happened when 188 tons of 76 octane gasoline suddenly flew out of an underground tank of a capacity of 1000 tons into a closed space after the aperture for cleaning instead of that for emptying had been opened by mistake.

Ginger Beer

http://www.news24.com/News24/South_Africa/News/0,1113,2-7-1442_1306381,00.html on 13 January 2003

Woman drowns in ginger beer

12/01/2003 22:58

Wilna de Klerk

Tarkastad - The wife of a professional hunter has drowned in a tank used to brew ginger beer.

A neighbour found Leoni Lourens's body in the green water tank on the farm, Comri, early on Saturday morning. The tank was kept in a barn.

Police spokesperson captain Erris Claasen said Lourens (40) was dressed in a swimsuit and left a nightgown, tracksuit pants and jacket, shoes and a towel in a neat stack on the barn floor.

Nico Lourens said on Sunday he was in the East London area with clients over the weekend. His wife was alone on the farm when the tragedy happened.

He said he tried to phone his wife on Friday evening, but later assumed that she had gone out.

When he still couldn't get hold of her by on Saturday morning, he phoned a neighbour, Gert Botha, to investigate.

Police initially suspected that the woman had been overcome by gasses from the beer brew.

Her husband said they were busy experimenting with brewing ginger beer on a large scale and his wife might have climbed into the tank to retrieve a thermometer.

It seems as if she climbed up to the tank with a ladder and then used a rope to descend into the tank.

Lourens said the tank was only 1.5m deep.

Lourens said his wife was involved in a serious car accident a year ago that affected her sight. He suspects that she hit her head and then fell into the mixture.

Claassen said police did not suspect foul play.

A sample of the tank's contents has been taken and a post-mortem will be performed later this week.

Manure

<http://www.washingtonpost.com/wp-dyn/articles/A7489-2003May2.html> on 5 May 2003

Two Men to Face Charges in Manure Deaths

By BRIAN SKOLOFF

The Associated Press

Friday, May 2, 2003; 8:44 PM

MERCED, Calif. - A judge let manslaughter charges stand against two men accused in the deaths of two irrigation workers who drowned in a pool of manure.

The case is among the first to be prosecuted under a new state law that lets authorities file felony charges for worker safety violations.

Merced County Judge Frank Dougherty also ordered prosecutors on Friday to combine the 20 state safety code violations against the defendants into a single count. He then ordered the defendants to return for a May 23 arraignment on the amended three-count indictment.

Attorney Kirk McAllister said his client, Patrick J. Faria, a former owner of the Gustine-area dairy, will plead innocent. The attorney for Alcino Sousa Nunes, the farm's foreman, would not comment.

The deaths happened in 2001, when Enrique Araisa, 29, was overcome by gases from excrement as he tried to fix a pump in a large concrete waste pipe. He fell into a pool of liquid manure and drowned. Jose Alatorre, 22, fainted and fell into the waste while attempting a rescue.

One of the workers was tethered to a rope, but no other safety codes were followed, prosecutors have said. The workers at the Aquiar-Faria & Sons dairy were not provided proper training or respiratory equipment and the air in the pipe was not tested before they entered the confined space, according to the indictment.

Work in confined spaces, such as grain silos and wine vats, requires air monitoring and safety harnesses. The California Occupational Safety and Health Administration fined the dairy \$126,650, but the dairy has appealed.

State regulators say inspections were increased following a third manure pit death in August 2002.

Popsicle

<http://www.cbc.ca/storyview/MSN/world/national/2005/06/22/popsicle-050622.html> on 28 June 2005

Giant Snapple project floods New York square

Last Updated Thu, 23 Jun 2005 08:35:04 EDT

CBC News

An attempt to erect a 16-tonne ice pop in a New York square froze traffic and created a sticky situation for the company behind the stunt.

The soft-drink maker Snapple tried to get into the Guinness World Records book by installing the 7½-metre confection in downtown Manhattan on Tuesday.

As a construction crane began to haul it upright, a pink tide of kiwi-strawberry-flavoured fluid spread across Union Square.

The slush forced pedestrians to flee for higher ground. Firefighters closed off several roads, fearing that vehicles and bicycles could slip.

"What was unsettling was that the fluid just kept coming," Stuart Claxton of the Guinness Book of World Records told the New York Daily News.

"It was quite a lot of fluid. On a hot day like this, you have to move fast."

The frozen treat had to be fully standing to beat the world record, set in Holland in 1997 by a 6½-metre, nine-tonne ice pop.

Snapple called off the stunt while the ice pop was only partially lifted, fearing that it would collapse in the 27 C heat.

The company was trying to get publicity for a new line of frozen treats called Snapple on Ice.

Salad Dressing

http://www.dispatch.com/live/content/local_news/stories/2008/07/02/Trashy.ART_ART_07-02-08_B1_7HAKVJT.html?sid=101 on 5 August 2008

Storms wash salad dressing into basements

Clintonville homes face odd deluge

Wednesday, July 2, 2008 3:20 AM

By Elizabeth Gibson

THE COLUMBUS DISPATCH

Last week's storms flooded some Clintonville houses with water and others with ingredients for salad dressing.

But don't pull out your carrot sticks yet.

Storm water combined with sewage from the T. Marzetti Co., a producer of salad dressings on Indianola Avenue, overwhelmed the Columbus storm-sewer system and flooded at least 10 nearby homes, an Ohio EPA representative said.

"It's creamy-ranch- dressing-looking crap," said resident Steven Maiken. "It's not toxic waste, but we did have to throw away a lot of stuff. We tried to wash it off over and over again."

Maiken reported the problem to the Environmental Protection Agency yesterday as he and his neighbors on Northridge Road grew increasingly confident that their basements had been invaded by salad toppings.

Suitcases, stereos, a fake Christmas tree, dishes, mattresses and a little wooden dollhouse lay in piles of black garbage bags that stretched down the street.

The gunk invaded eight town houses managed by the Wallace F. Ackley Co. across the street from the Marzetti factory at 3838 Indianola Ave., said Cyndi Crist, the property's rent manager.

Residents said Ackley quickly helped them clean up their basements, but Crist said it was a pitiable sight.

"Everyone was very upset. Emotions were running high and it was very smelly," she said. "We will be writing to the city and hopefully getting some action."

Backed-up storm sewers are common in severe storms, said Michael Dalton, an EPA on-scene coordinator.

For the past 30 years, the EPA has received periodic complaints about discharges into a creek from the city sewage line that serves Marzetti. A company representative declined to comment.

The EPA suspects that pipes from local homes merge with the pipes from the dressing factory, but the pipes aren't wide enough to handle extra water, Dalton said.

A severe storm brings an instant basement salad.

"What happens is that the city allows a lot of construction in an area but doesn't have the money to replace the sewer system," Dalton said. "It's a matter between the city and the residents."

Columbus sent a team out to assess the situation yesterday, said Rick Tilton, a spokesman for the Public Utilities Department.

With record rainfall in June, he said, there were bound to be sewer problems, despite the city's \$3 million project to stop basement flooding by installing valves on home sewer lines.

"Rains that heavy, you're going to get flooding because there isn't a storm system in America that can handle rain that intense," Tilton said.

With any flooding there is a risk of bacteria and other dangerous substances riding the waves, the EPA's Dalton said. He added that this spill appears to contain oil, milk, spices and other waste, and residents should strip and bleach their basements.

Northridge resident Alisa Jones said she is still cleaning up the mess left by the goo, which had the neighborhood mystified until yesterday.

"We knew it was food of some sort because the ants have been going crazy," Jones said. "Every once in a while you get a whiff, and ugh."

Sewage

http://news.bbc.co.uk/2/hi/middle_east/6498835.stm on 5 August 2008

[Sewage flood leaves dead in Gaza](#)

Last Updated: Tuesday, 27 March 2007, 14:07 GMT 15:07 UK

At least four people have been killed after a sewage treatment pool collapsed and flooded a village in the Gaza Strip, Palestinian officials said.

The earth wall gave way in the village of Umm al-Naser in northern Gaza, submerging at least 25 houses.

About 25 people are reported hurt but scores more are unaccounted for. The village has a population of 3,000.

Residents said the flood was like a "tsunami" and Interior Minister Hani al-Qawasmeh has rushed to the scene.

The BBC's Katya Adler, in Jerusalem, said angry residents crowded around Mr Qawasmeh when he came to inspect the damage.

Reports say shots were fired, forcing the minister and his entourage to flee the village, although it is unclear where the gunfire came from.

Health ministry officials said the dead included a four-year-old boy and a 70-year-old woman.

Militants from the Hamas group and rescuers were helping to find those thought buried in the sewage.

The Israeli army said it would also help - although it is not yet known whether Palestinian officials accepted the offer.

Village council head Ziad Abu Farya told the Associated Press news agency the scene was "our tsunami".

One villager, Amina Afif, said: "We lost everything, everything was covered by the flood. It's a disaster."

The cause of the collapse is still unknown, although aid agencies and the UN had warned of the risk of a flood as far back as 2004.

Officials from the Palestinian Water Authority are at the scene investigating.

Authority head Fadel Kawash told AP several sewage projects, including one in the village, had been halted after international funding dried up in the wake of the election victory of Hamas in January last year.

"We had a project to treat sewage in north Gaza, it was worked on for two years," he said.

"We built a pressure pipeline and pumping station but it was stopped after... troubles began."

Hamas also blamed the flood on the withdrawal of foreign aid.

But Stuart Shepherd, the UN's humanitarian aid officer in Gaza, said the Umm al-Naser plant had not been affected by the aid boycott.

A UN report in 2004 had warned that the sewage facility was at its maximum capacity, and flooding was inevitable unless a new waste treatment plant was constructed.

Mr Shepherd said foreign investment had been secured to build the treatment plant, but construction had not gone ahead because of security risks in the area.

<http://news.bbc.co.uk/2/hi/asia-pacific/7542547.stm>

Sewage surge hits Tokyo workers

Page last updated at 09:28 GMT, Tuesday, 5 August 2008 10:28 UK

A municipal worker in Tokyo has been killed and four are missing after being struck by a tide of sewage while repairing a drain, reports say.

The worker died in hospital after being found floating unconscious in a river near the drain, emergency officials told the Associated Press news agency.

A fifth worker managed to escape the sudden surge under a manhole in the south-east of Japan's capital.

The repair work on the drains followed thunderstorms and flooding in the city.

The fire department is working to locate and rescue the missing workers, spokesman Masami Komura told AP.

<http://www.standard.co.uk/news/world/huge-human-waste-spillage-closes-us-motorway-9658851.html>

Huge human waste spillage closes US motorway after lorry tips over

Saturday 9 August 2014 09:36 BST

A huge spillage of human waste closed a major US motorway after a lorry tipped over yesterday.

Authorities said around 12 tonnes of waste covered Route 127 in Michigan after an 18-wheeler truck's tire blew out as it tried to negotiate a turn, causing it to tip over.

The lorry was reportedly carrying a mixture of human waste and manure and was smeared almost 2,000 feet along the road, according to witnesses.

Francesca Amiker, a reporter from Michigan news site WLNS, told CBS Detroit that the incident triggered several other road accidents, when it happened at around 5am local time.

"We had one woman I just spoke to, and she was driving on that curve — she didn't see it because police didn't have it blocked off yet — so she slid into that, and then a motorcycle crashed into the back of her," she said.

"And then another truck didn't hit those two, but was also involved in some capacity in the accident."

Those involved were only reported to have suffered minor injuries.

The road was closed for the rest of the morning amid a huge clean-up operation during which health checks were carried out.

Syrup

Talwar, V., N. Sood, and P. Verma. 2009. "Drowning in Concentrated Sugar Syrup". Indian Pediatrics, vol. 46, no. 4, pp. 352-353.

Tequila

<http://www.washingtonpost.com/wp-dyn/articles/A51743-2003Feb10.html> on 11 February 2003

Ky. Fire Officials Probe Tequila Overflow

The Associated Press Monday, February 10, 2003; 11:50 AM

More than 1,000 gallons of tequila spilled into the sewer system Monday after a worker tried to unload it from a truck into an already full storage tank at a distillery, officials said.

The tequila overflowed at a rate of 100 gallons per minute, resulting in 1,500 to 1,800 gallons entering the city sewer system, said Phil Lynch, a spokesman for the Brown-Forman Distillery.

Fire and sewer officials were called because of the flammability of the 80-proof liquor, he said. Water was used to dilute the spilled alcohol.

"It was a simple case of human error," Lynch said.

Treacle and Molasses

1919 Boston, Massachusetts

<http://www.boston-online.com/bizdisasters.html> on 15 August 2002

Disasters

Yecch - the Great Molasses Flood

Commercial Street and Cobb's Hill Terrace, North End

If you had to choose how to die, drowning in molasses would probably not rank high on your list. On Jan. 15, 1919, 21 people, a dozen horses and at least one cat had no choice. A 58-foot-high, 90-foot-wide cast-iron tank holding 2.2 million gallons of molasses burst, sending a tsunami of the viscous liquid down Commercial at 35 m.p.h., destroying houses, commercial buildings and a part of the elevated railroad.

Today, no monument marks the disaster (the closest you'll get is a small sailors' memorial in the playground off Commercial showing a ship going under). But climb up the terrace (which looks like a stone medieval rampart), look out over Commercial Street toward the harbor and imagine a three-story wall of molasses flowing past.

<http://www.mv.com/ipusers/arcade/molasses.htm> on 15 August 2002

The Molasses Disaster of January 15, 1919

Molasses disaster? Can molasses kill people?

Yes, a molasses tank in Boston exploded with great force and flooded the streets with an eight-foot wave of molasses. It killed 21 people, crumpled the steel support of an elevated train, and knocked over a fire station.

Yankee Magazine Article

"The Molasses Disaster of January 15, 1919" by John Mason.

John Mason describes the events with facts known about the disaster and some embellishments coloring the lives of the victims.

Smithsonian Article

"Without Warning, Molasses in January Surged Over Boston" by Edwards Park.

Edwards Park also describes the events of the day, with some impressions of its place in Boston history.

The Violence of the Explosion

Fermentation, a sudden rise in temperature, and an inadequate tank caused the tank containing two million gallons of molasses to explode. The force of the explosion was so great that:

- Half-inch steel plates of the huge molasses tank were torn apart. ("Seeking Cause of Explosion," The Salem Evening News, January 16, 1919: 7.)
- The plates were propelled in all directions, hard enough to cut the girders of the elevated railway. (Ibid.)
- After the explosion, a tremendous vacuum sucked into ruin buildings which had withstood the primary blast. (Ibid.)
- The vacuum also picked up a truck and dragged it across the street toward the molasses tank. ("Big Molasses Tank Blast Kills Eleven," The Boston Globe, January 16, 1919: 8.)
- An elevated train was lifted off the rails and fell onto the ties. (Ibid.)
- Some buildings collapsed.
- Some buildings were knocked off their foundations.
- Some buildings were buried under the flood of molasses.

The Terror of the Scene

I went to original newspaper articles to find out what it was like. Envision a disaster scene with smashed buildings, overturned vehicles, drowned and crushed victims, and terrified survivors

running away covered in molasses. Like the modern-day disasters with which we are unfortunately familiar, there was chaos, terror, buildings in ruins, victims to be dug out, trapped survivors to be rescued, rescue workers among the victims, and anguished families rushing to relief centers to find their relatives. It was like any horrible disaster scene, with the addition that everything was covered in smelly sticky brown molasses.

http://www.tafkac.org/death/molasses_massacre.html on 29 December 2002

From: Phil Gustafson

Subject: Re: Great Boston molasses flood?

Date: Tue, 19 Oct 1993 00:10:30 GMT

Scott Larson writes:

>Can anyone confirm or deny that years ago there was a "great molasses flood" in Boston.

On January 15, 1919, a molasses tank belonging to the United States Industrial Alcohol Company, located near the junction of Commercial and Causeway Streets in Boston, burst when the temperature rose to an unseasonable 43 degrees F.

A trolley freight terminal and several warehouses and homes were destroyed. Support pillars for the elevated railway were bent. Twenty-one people were crushed, drowned, gooped, or otherwise molassassed to death.

The cleanup was a tedious process. Legend has it that streetcar seats were sticky as far west as Worcester.

>Why can't I find any mention of it in an encyclopedia?

Either it's not in the encyclopaedia or you looked in the wrong place.

Phil "Feeding Lee a rather obvious straight line" Gustafson

2013 Honolulu, Hawai'i

<http://news.nationalgeographic.com/news/2013/13/130917-molasses-oil-spill-hawaii-honolulu-cleanup> on 1 September 2014

Hawaii Molasses Spill: Better or Worse Than Oil?

Tanya Basu, National Geographic

PUBLISHED SEPTEMBER 17, 2013

An oil spill? No, it's molasses—and it has created an environmental catastrophe that so far has killed thousands of fish that dwelled in Honolulu Harbor.

Last week, a pipeline owned by shipping magnate Matson carrying molasses from Hawaii to cargo ships bound for California leaked as much as 233,000 gallons of molasses into the waters of Honolulu Harbor. The amount is equivalent to more than 5,500 barrels of oil.

Hawaii state officials said there was little they could do to clean up the spill, warning the public to stay out of water in the area. Matson pledged to cover costs associated with the spill response.

The density of the molasses proved immediately deadly for the harbor's marine life, which suffocated as the sticky substance sank to the ocean floor. (This video graphically shows the destructive nature of the molasses.) But at least one aspect of the composition of molasses could mean the environmental impact is less than that of an oil spill.

The sugar in the molasses may help restore the harbor to its previous state, says Grieg Steward, associate professor of oceanography at the University of Hawai'i at Manoa and a researcher who has been involved with monitoring the water chemistry of the harbor after the spill.

"Sucrose is table sugar, and it's something even we can degrade," Steward said. "We oxidize that carbon and turn it into carbon dioxide."

Bacteria acts as an indicator for the cleanup, removing oxygen from the water and producing carbon dioxide, creating an environment that will help resident bacteria absorb the spill. Bacteria have been multiplying due to the presence of molasses.

See also <http://www.bbc.co.uk/news/world-us-canada-24072561>

Wax

Capovilla, M., M. Durigon, and G. Lorin de la Grandmaison. 2007. "An Original Cause of Drowning in an Industrial Environment". The American Journal of Forensic Medicine and Pathology, vol. 28, no. 1, pp. 91-93.

Mullan, T.M. and E.L. Vey. 2011. "Unique drowning in an atypical medium: paraffin wax in the setting of a motor vehicle crash—case report and literature survey". Forensic Medicine, Science and Pathology, vol. 7, no. 2, pp. 198-208.

Whiskey

<http://www.telegraph.co.uk/news/uknews/9006542/Distillery-worker-commits-suicide-by-leaping-into-vat-of-whisky.html>

Distillery worker commits suicide by leaping into vat of whisky

A distillery worker killed himself by leaping into a huge vat of whisky, it has emerged.
5:29PM GMT 10 Jan 2012

Brian Ettles, 46, drowned after he climbed up a 16ft wooden container filled with water and yeast and threw himself inside.

Paramedics and firefighters rushed to the scene of the tragedy at The Glenfiddich Distillery, but he was pronounced dead at the scene.

Father-of-two Mr Ettles' was discovered inside the 50,000-litre tank, known as a washback, which is used in the early stages of distilling whisky.

It is thought that the incident at the distillery in Dufftown, Banffshire, on Saturday evening happened the day after Mr Ettles's wife Irene celebrated her 54th birthday.

The family were too distraught to speak but the close-knit community were left in shock.

Eileen Mackenzie, 67, who lives close to the family home, said: "I am just really shocked.

"It's such a horrible way for someone to go and most people I have spoken to are really quite upset about it.

"He was just a young man and I have no idea what might have made him want to take his own life in such a way."

Mr Ettles, from nearby Keith, was father to son Stuart, 21, and daughter Julie, 25.

He held a senior role at the world-famous whisky plant and had been an employee for 23 years.

A waitress at The Commercial Hotel in Dufftown said that Mr Ettles had been into the hotel's restaurant and bar over the festive period.

The worker, who didn't want to be named, said: "Brian had been in the bar a few times for food and a pint after he finished work.

"Nobody here really knew him that well because he lived in Keith, but he seemed like a nice enough man and we are all really shaken up that he has died."

Shocked bosses at the Glenfiddich plant closed the popular tourist attraction for the second day yesterday (Tue) as a mark of respect for Mr Ettles and so police could finish their investigations.

A spokeswoman for Grampian Police said: "Officers were called to an address in Dufftown where a 46-year-old man was found dead. There are no suspicious circumstances."

The award winning Glenfiddich plant was opened in 1886 by William Grant and is still run by members of his family.

A spokesman for the firm said: "We decided to close as a mark of respect for the person who died. Our thoughts go out to his family."

Wine

<http://www.thekcrachannel.com/news/1687524/detail.html> on 30 September 2002

Worker Falls Into Wine Tank, Dies

Teen Was One Of Several Temporary Workers

POSTED: 5:24 p.m. PDT September 25, 2002

UPDATED: 8:12 a.m. PDT September 26, 2002

ESCALON, Calif. -- A Northern California winery worker was found dead Wednesday at the bottom of a wine tank that holds up to 29,000 gallons.

The 18-year-old Lathrop resident Jose Padilla was discovered at the Canandaigua Winery in Escalon.

“Apparently, he fell into one of the concrete fermentation tanks located in this winery,” said San Joaquin County Sheriff’s Department spokeswoman Nellie Stone.

According to Canandaigua Wine officials, Padilla was one of several temporary workers hired to help out during the crush-harvest season.

Wine company officials extended their sympathies.

“Employees are properly trained, and we consider their safety to be of utmost concern. and we are committed to providing a safe and secure work environment,” Canandaigua Wine spokeswoman Lisa Farrell said in a prepared statement.

A Canandaigua Winery spokesperson said that the company works closely with Cal-OSHA to make sure safety regulations are in place and met at all times. Investigators are trying to figure out how and why the Padilla fell in to the tank.