

May 2007

The Great Boston Molasses Flood of 1919



Before ↑ ↓ After



On January 15, 1919, people in north Boston, Massachusetts, heard a loud rumbling noise and watched in horror as a 50-ft (15 m) high tank containing 2.3 million U.S. gallons (8,700 m³) of molasses suddenly broke apart, releasing its contents into the city. A wave of molasses over 15 ft (5 m) high and 160 ft (50 m) wide surged through the streets. How slow is molasses in January? This wave traveled at an estimated speed of 35 mi/hr (60 km/hr) for more than 2 city blocks. 21 people were killed, over 150 injured, and the damage estimate was equivalent to over 100 million U.S. dollars in today's currency.

What caused this catastrophic tank failure? Some of the causes identified by the investigation included:

- The tank was not properly inspected during construction.
- The tank was not tested after construction and before filling it with molasses.
- The tank had been observed to be leaking at the welds between the tank's steel plates before the failure, but no action had been taken.

Do you know?

- You might think that an incident that occurred over 80 years ago is not relevant to today's industry. But, we still have catastrophic failures of storage tanks today (see pictures below), and for similar reasons.

- A large quantity of any liquid, even a non-hazardous material such as molasses or water, can be dangerous if rapidly released in large quantities, simply because of its volume and mass.

What you can do

- If you observe leakage, corrosion, or other indication of potential failure in a storage tank, report it immediately to management.
- Make sure that any new tank, or one being returned to service following repair or inactivity, is properly inspected and tested before filling.
- Ensure you know the operating capacities of your tanks and double check the level before filling.
- Don't throw out your old incident reports. Read them again, and remember the lessons. We can learn a lot from things that happened a long time ago.



January 1988 — Floreffe, Pennsylvania, USA, tank failure releases over 4 million U.S. gallons (15,000 m³) of diesel oil into the Monongahela River.

January 2000 — Cincinnati, Ohio, USA, tank failure releases 365,000 gallons (1400 m³) of fertilizer solution into the Ohio River.



Remember the lessons of the past!

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