The Great Molasses Flood
By Timothy Shannon

On January 15, 1919 the Great Molasses Flood occurred on Commercial Street in the Italian immigrant populated North End of Boston. Purity Distilling Company, a subsidiary of The United States Industrial Alcohol Company (USIA), had recently constructed a 50 foot tall and 90 foot wide steel tank in 1915 to hold its molasses. This tank had a capacity of 2.5 million gallons of molasses, which was to be used to make industrial alcohol. The collapse of the tank resulted in approximately an entire tank’s worth of molasses traveling down Commercial Street at around 35 miles per hour and as high as 15 feet.

The damage caused from this incident was substantial. It is estimated that there was nearly $100 million in property damages in current monetary value. 21 people were killed and another 150 people were injured. Cleanup took over 80,000 hours to complete. The aftermath of this flood led to drastic changes in legislature, engineering licensure, and engineering practices nationwide.

Since the tank was neither a building nor bridge, the regulations for constructing it were very lax and basically non-existent. The tank’s blueprints did not need to be approved by the Boston Building Department and the construction was overseen by Arthur Jell, a man with no engineering or construction experience. Jell failed to complete basic safety tests including tests to make sure the tank did not leak. Before the collapse, leaks were prevalent and Purity Distilling Company even painted the tank brown to try and cover up the obvious leaking that occurred. Maria Iantosca, an Italian immigrant, provided a first-hand account of this leaking when she said “Pasqualeno, and Maria and Antonio. They bring the cans. The molasses leaks from that tank all day long and they go there and scoop it up. We can use it. Otherwise it goes to waste.” (Puleo, 2004, pg.31). Residents and even workers working on the tank expressed their concerns about the leaks, but were ignored.

Over 100 lawsuits were combined into a single class-action lawsuit overseen by Colonel Hugh Ogden. This incident occurred during an extremely pro-business era in regards to legal actions meaning that businesses tended to win the majority of negligence lawsuits. During this six year lawsuit procedure it was determined that Jell had not reached out to anyone with engineering or construction experience to review the blueprints and safety tests were skipped for budget and deadline reasons. Also, concerns from employees were ignored and the steel used for the tank was 10% thinner than specified in the plans, which resulted in significantly less resistance to the multiple pressures applied to the tank. Colonel Ogden decided that the incident resulted from structural failure of the tank. He considered USIA at fault because they decided to place the tank in a highly populated area without concern for the public’s safety and because
they placed Jell in charge of overseeing construction without proper experience, education, and expertise. The lawsuit resulted in around a million dollars in settlements to participants in the single class-action lawsuit.

The Great Molasses Flood brought about significant legislative, engineering licensure, and engineering practices changes. Companies were now being found responsible for negligence and forced to face consequences for their laxity. People began to stop just willingly accept all the actions of the big businesses and businesses became more regulated. After this incident, Boston began to require that calculations of architects and engineers and plans be filed with Boston Building Department before receiving a permit. Most other states followed in requiring filing of these documents and this practice is now basically nationwide. The Great Molasses Flood also lead to stricter engineering certificate requirements and that drawings must be stamped by professional engineers. Engineering certificate requirements now include earning a degree from an engineering program, passing the Fundamentals of Engineering exam, gaining four years of work experience, and passing the PE exam. The United States Bureau of Labor Statistics also responded to incompetent inspectors by releasing the following bulletin: “The day is here when the qualifications for an inspector demand not only intelligent persons, not only those well equipped with industrial training, not only the specialist in industry, but the men and women, to some extent at least, who have a high appreciation of the importance of the work they are doing” (Bulletin of the United States Bureau of Labor Statistics, 1927). This bulletin not only stressed the importance of being qualified but also the importance of being ethical which is a major focus in current engineering practices. The Great Molasses Flood was a key factor in a major shift in the importance of engineering ethics.

The Great Molasses Flood also brought other significant changes to Boston. As a result of this incident, molasses distilling and molasses trading significantly declined after previously being a central good for Boston and New England’s economy. Also as a result of the incident, Italian immigrants in the North End began applying for citizenship so they could become more involved in the politics governing their community. For too long the Italian immigrants had been passive in regards to decisions made that had a direct impact on them. They were determined not to allow an incident like this occur again so they became much more involved in the decision making for their community.

Even though the Great Molasses Flood is not a widely known event in United States history, this incident had a significant impact on the city of Boston and lead to important legislative, engineering licensure, and engineering practices changes nationwide.
Works Cited


