



Texas City Disaster

Texas City, on the southwestern shore of Galveston Bay seven miles from Galveston and eleven miles from the Gulf of Mexico in Galveston County, is a deepwater port on the mainland. Texas City became the site of the worst industrial catastrophe in United States history. When two Liberty merchant ships, the *SS Grandcamp* and *SS High Flyer*, carrying ammonium nitrate fertilizer exploded on the 16 and 17 April 1947. This Primary Source Adventure (PSA) will utilize period photographs and personal accounts from *We Were There* Texas City's fiftieth anniversary project to commemorate the Disaster. The learner will gain an understanding of, the scale of the damage, and how people reacted to the crisis.

On the morning of 16 April 1947, just before 8:00am, longshoremen removed the hatch covers on Hold 4 of the French Liberty ship *SS Grandcamp* to finish loading a cargo of ammonium nitrate fertilizer; some 2,300 tons were already on board, 880 of which were in the lower part of Hold 4.¹ Shortly thereafter smoke was reported and began to billow from the hold; the longshoremen were ordered out of the hold after their attempts to extinguish the fire failed. The first officer ordered that no water be used to fight the fire, although the ship's fire hoses were available and the ship's fire pump was operating. Instead the first officer ordered steam introduced into the hold in an attempt to smother the fire.² By 8:30am the pressure from the compressed steam blew off the hatch covers, and a thick column of orange smoke billowed out. The smoke and fire began to attract onlookers and the fire department was called. The twenty-eight men of the Texas City Fire Department arrived and began fighting the fire. At about 9:00am flames spewed from the open hatches; at 9:12am the *SS Grandcamp* detonated in a massive explosion felt a hundred miles away at Port Arthur. Massive clouds of black smoke mushroomed into the sky. The entire dock area was destroyed, and the nearby Monsanto Chemical Company, grain warehouses, along with numerous oil and chemical storage tanks. A chain reaction of smaller explosions and fires were triggered by flaming, flying debris. Over 1,000 residences were damaged or destroyed by the initial explosion.

The explosion had killed twenty-six Texas City firemen and destroyed all of the city's fire-fighting equipment, including four trucks. The shockwave destroyed buildings and sent metal shrapnel raining down across the city. The shrapnel ranged in size from a rivet head to a portion of the ship's structure estimated to weigh 60 tons. Within one-half mile of the epicenter the shrapnel pattern was one 'missile' every 2 square feet. Almost all persons in the dock area: firemen, ships' crews and spectators were killed. Additionally a wave of water at least fifteen feet tall swept inland grounding the *Longhorn II*, a 150ft steel barge, on land. The water then carried debris and many dead and injured persons back to sea, where most perished. The large number of injured quickly overwhelmed the three medical clinics. Texas

¹ Hugh W. Stephens. *The Texas City Disaster 1947* (Austin: University of Texas Press, 1997), 1.

² United States Coast Guard. *Record of Proceedings of Board of Investigation Inquiring Into Losses by Fire and Explosions of the French Steamship Grandcamp and U.S. Steamships Highflyer and Wilson B. Keene at Texas City, Texas 16 and 17 April*. 2 Vols. Washington D.C. 24 September 1947, 542.



City had no hospital. Within the hour doctors, nurses and ambulances began arriving on their own initiative from Galveston, surrounding cities and nearby military bases, until almost 4,000 workers were present; to establish temporary hospitals, morgues, and shelters.

The force of the *SS Grandcamp* explosion tore the *SS High Flyer*, in dock for repairs, from its moorings and wedged it against another cargo vessel, the *SS Wilson B. Keene*. The ship was loaded with sulfur and a thousand tons of ammonium nitrate fertilizer. The *SS High Flyer* caught fire but given the confused situation it was some time before the danger was realized. Not until 11:00pm were tugs dispatched from Galveston to tow the burning ship away from the docks. They were unable to free the ship. So by 1:00am on 17 April, with flames pouring from the *SS High Flyer* holds, the tugs cut their tow lines and retreated. Ten minutes later the ship exploded—further devastating the waterfront facilities and starting new fires among the petroleum storage tank farms. The explosion sent metal shards in a 6,000 foot circle. However, casualties were light since the area had largely been evacuated prior to the explosion.

The *SS Grandcamp*'s explosion caused the worst industrial disaster in United States history. The precise number of dead was impossible to establish given the power of the explosions, confusion, and commuter nature of many dock workers. The anchor monument records 576 persons killed, of whom 398 were identified, while 178 are listed as missing.³ Most bodies were never recovered and 63 bodies were buried unidentified. The number of injured is generally estimated at around 3,500, which roughly equaled 25 percent of Texas City's estimated population of 16,000. In the 1947 the property loss amounted to about \$100 million along with 1.5 million barrels of petroleum products consumed in the flames of the disaster valued at about \$500 million. The port's bulk cargo-handling operations never resumed. One-third of the town's 1,519 houses were condemned, leaving an estimated 2,000 people homeless. The various insurance companies paid out around \$50 million in claims. Within six months most of the homes were repaired or rebuilt. The people of Texas City recovered quickly as well and committed themselves to rebuilding their town. Aid donations from individuals and companies eventually totaled \$1,063,000 providing an incalculable boost to public morale and the economic existence of the town. Most companies made immediate commitments to rebuild or in some cases even expand their operations.⁴ Edgar Queeny, the chairman of Monsanto, came to Texas City on the 18th of April to announce that a new and expanded plant would be built on the site of the destroyed original. The Monsanto plant, along with the bulk of the petrochemical industry, was rebuilt in just over a year. Republic Oil launched plans to increase refining capacity from 93,000 to 130,000 barrels daily.

The Coast Guard and Federal investigations publicized the dangers of ammonium nitrate fertilizer, which inspired new regulations designed to increase the safety of transporting hazardous materials. Colonel Homer P. Garrison, director of the Texas Department of Public Safety, noted the lack of emergency plans and organization capable of assisting communities that were disaster areas. He recommended that authorities establish major disaster plans and create control centers to manage response during a disaster. The

³ Priscilla Myers Benham. "Texas City, TX." *The Handbook of Texas Online*.

<http://www.tsha.utexas.edu/handbook/online/articles/TT/hdt3.html> (accessed 18 June 2006).

⁴ Stephens, 105.



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Federal Civil Defense Act (1950) and Texas's Civil Protection Act (1951) allowed the governor to establish Defense and Disaster Relief Councils—bringing together state government and non-government agencies. The Texas City disaster provided impetus to begin establishing basic response plans to industrial disasters and to improvements in safety procedures.

This PSA utilizes primary sources in the form of photographs taken during the disaster and written accounts. Some advantages of these sources are that they allow learners to experience an individual's personal recollection of the event along with period photographs. One disadvantage of these personal written recollections is that they were compiled fifty years after the disaster, thus the author's memories may have been included by the passage of time and other accounts of the event. This PSA allows learners to experience the Texas City disaster from an individual perspective.

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