

Looking Back:

# Wilmington Terminal and Warehouse Company

**O**n March 9, 1953, the Wilmington Fire Department faced one of its largest and costliest fires in city history. The fire, located in a warehouse complex on the Cape Fear River, pushed the department to its limits and then some. It seemed for a time that the city's waterfront would be completely wiped out.

**Multiple Buildings Involved**

The fire occurred at the Wilmington Terminal and Warehouse Company, part of a large complex of seven warehouses. The warehouses were perpendicular to the river, with slips between some of the buildings. Rail access was alongside each building. All of the buildings were heavy timber construction with a brick exterior, but each had different contents and protections in place. The Wilmington Terminal Nitrate Warehouse was equipped with a sprinkler system and contained 25,000 tons of sodium nitrate and 200 tons of fishmeal. The Wilmington Terminal Tobacco Storage Warehouse was a one-and two-story building with brick firewalls, as well as metal siding in some areas. It also was equipped with a sprinkler system and contained 5 million pounds of tobacco, 1,000 rolls of roofing, 275,000 100 lb. paper bags and 10 barrels of lubricating oil. Seaboard Air Line Railroad Warehouse E was under repair and had no contents. Seaboard Air Line Railroad Warehouse D contained 45,000 100lb. bags of sugar. Seaboard Air Line Railroad Warehouses A, B, and C had various contents. Warehouse A contained grocery supplies, Warehouses B and C had fertilizer materials, including calcium ammonium nitrate and ammonium sulphate. Most of the warehouses were constructed in 1901 and were around 50,000 to 80,000 square feet in size.

**The Alarm Goes Out**

At 8:55 that Monday morning, an alarm was transmitted to the Wilmington Fire Department for a fire at the Wilmington Terminal Nitrate Warehouse. The initial response to the fire included Chief J.L. Croom, First Assistant Chief J.A. West, Engine Companies 1 and 3, and the



*A view of the fire in it's early stages from the east. Note the Max Manus in the river away from the wharf.*

fireboat Atlantic III. En route to the fire, heavy smoke was noticed by the responding companies. On arrival, both engines laid in from the closest hydrant using 2½ inch supply lines. They advanced an attack line from each engine to the west end of the building. These lines were approximately 800 feet long. Employees at the warehouse had been operating a house hose line on the fire with little success. The fireboat was forced to tie-up at the extreme southwest corner of the wharf since the 425-foot Norwegian freighter, Max Manus, which was unloading nitrate, was taking up most of the dock space. A 2½ inch line was stretched from the Atlantic to operate on the fire. By the time these lines were in place, the fire had full control of the western section of the building. The hose streams had no effect in halting the spread of the fire. Second Assistant Chief H.W. Corbett was overcome by the smoke and collapsed inside a section of the warehouse that would be fully involved just seconds after he was pulled to safety by Carolina Power and Light lineman, Kimball Burriss. Chief Corbett refused further aid and returned to his post. At 9:10 a.m., Chief Croom called for two more companies to respond, and

sounded a general alarm, which recalled all off-duty firefighters. He ordered the Max Manus to pull away from the wharf, which allowed the Atlantic better access to the fire.

As the second alarm companies arrived, additional lines were stretched to the fire. Even with these lines in operation, the crews were continually forced backwards by the rapidly spreading fire. The fire walls did not seem to hold the fire in check, and fire was spreading both overhead and under the flooring. Chief Croom ordered the lines on the south side of the Nitrate Storage Building withdrawn and replaced in the Tobacco section in an attempt to halt the southward spread of the flames. The Atlantic was forced to move because of the intense heat which ignited the stern of the fireboat. Damage to the fireboat was minor and did not hamper operations.

Shortly after lines were set up in the Tobacco section, the stored sodium nitrate began exploding in a series of minor blasts. Two hoselines on the south side of the Terminal Building had to be abandoned because of the spreading fire. Walls on the north side began crumbling and lines on that side had to be

withdrawn. By this time, the entire west end of the Tobacco Section was engulfed in flames rapidly spreading eastward. The Atlantic was then moved to the west end of Warehouse E and the crew attempted to prevent that building from catching fire by directing its monitors for exposure protection. A portable master stream was set up on the east end of the same building for the same purpose. The pumper supplying the master stream was connected to a private hydrant but the supply was insufficient for the operation. While this pumper was disconnected, another pumper was connected to a city hydrant about 100 feet away to operate the master stream. Before this operation could be completed, at 10:32 a.m. the first major explosion occurred, blowing out a section of the north and south walls of the warehouse. The explosion scattered large pieces of timber, bricks, and hot, molten sodium nitrate over a wide area. About 15 men received burns and injuries in this explosion, and firefighting operations were abandoned in this area. Approximately 10 minutes after this explosion, as firefighters were attempting to move apparatus and equipment further to the south,

*Photographs by Hugh Morton, North Carolina Collection, University of N.C. at Chapel Hill.*

a second and worse explosion rocked the area. This explosion scattered more debris over the entire complex, setting fires at least 1,200 feet away. A civilian who was helping pull hose was severely burned. He died of his injuries the following Saturday. One pumper was on fire and two others were damaged. All the hoselines in operation were destroyed. All apparatus were finally moved to the vicinity of Warehouse C. The Atlantic once again was forced to move because the wharf where it was tied caught fire.

This last devastating explosion ignited Warehouses D and E. They became a raging inferno almost instantly. Smaller fires were burning in all of the other warehouses, sheds in the railroad yard, railcars, as well as brush and crossties. "The first sign of anything out of the ordinary was the ground trembling, followed by a low rumbling. Then an atomic-like cloud of white smoke erupted from the building, boiling skyward at least 100 feet, exploding and scattering molten nitrate of soda, timbers, etc. Almost instantly after the white smoke erupted from the building, a loud explosion occurred, followed by an intense white flame that enveloped the ground area for at least 100 feet northeastward from the building. The force of the explosion knocked persons to the ground who were standing at least 500 feet from the building, and the heat wave which followed seared the exposed skin of anyone within 250 feet.

The Wilmington Morning Star described the falling sodium nitrate as "flaming globs raining down." Twenty more firefighters were either burned or injured during this explosion, although most of the injuries were minor. After this, a call for mutual aid went out.

With all hoselines out of action (most of them destroyed), pumpers relocated, and more than a third of his firefighters burned or injured, Chief Croom had a disheartening situation before him. A stiff northeasterly wind was pushing the fire at a steady rate toward Warehouse C, which was loaded with fertilizer materials. A loading slip was all that separated Warehouses C from D. Chief Croom ordered the Atlantic into the slip to protect Warehouse C. Streams were placed on both buildings in an attempt to halt the fire spread. Firefighters brought new hoselines online, even though

many of the men were injured. Because they refused to quit, their strategy worked and the fire spread halted.

"Without our fireboat it would have been impossible to halt the spread of fire as the flames were well out of reach of land-based streams and too much credit cannot be given to the faithful men who stuck out the hell in that area," said Chief Croom.

About this time, two additional fireboats from the U.S. Navy's nearby lay-up basin arrived and joined in the fight. This combined effort finally made the fire manageable around noon. The fire itself was contained after about 24 hours. A steady rain three days later helped finally extinguish the smoldering debris.

#### Fires Investigated

The investigation into the cause of the fire began almost immediately. Along with the Wilmington Fire Department, investigators from the Coast Guard and the FBI conducted the investigations. They narrowed down the cause to two possibilities. The first cause was a spontaneous combustion of the stored fishmeal. Fishmeal generates heat because of the oxidation process. Historically, ships sank at sea because of fires caused by spontaneous combustion of the fishmeal they were transporting. Today, antioxidants added to fishmeal prevent such catastrophes. Investigators thought possibly the stored piles had smoldered underneath for quite some time until the fishmeal vented itself

to the open air. Another possible cause was electrical failure. On the morning of the fire, the lights in the vicinity of the fire were flickering. An electrician went to the warehouse and was on scene when the fire was discovered, but he had not located the trouble by the time the fires broke out.

The investigation showed that one cause of the rapid fire spread was a delayed call to the fire department. Employees on site fought the fire with house hose streams for approximately 10 minutes prior to calling for help. Another contributing factor was the failure of the Nitrate and Tobacco Storage Warehouse's sprinkler systems. Only one water gong was heard sounding during the fire, and it was sporadic. A few sprinkler heads were operating, but they had no effect on the fire. One possible problem was the operation of several of the private hydrants on site, which may have left insufficient water to supply the sprinkler system.

During the fire, the fire department had four of its six engine companies operating at the fire. Mutual aid companies included pumpers from Carolina Beach, Wrightsville Beach, Winter Park VFD, and a trailer pump from the Coast Guard. Two engine companies made the 60-mile journey from Camp Lejeune to be on standby. More than 100 firefighters were on scene, as well as personnel from the Coast Guard Port Security and Cutter Mendota. News of the fire traveled across the

nation and rumors ran rampant that the city was in danger of a disaster similar to the 1948 Texas City fire.

Chief Croom noted that the reaction of the sodium nitrate was unlike anything he had seen before. The violent explosions did not compare to previous fires he had encountered involving the chemical. During the fire, the material morphed into a lava-like substance that poured out of the building and spread outward up to 100 feet away, reaching depths of 6 inches or more. He noted that the reaction of sodium nitrate under extreme fire conditions is unpredictable and "discretion should become the better part of valor."

#### The Aftermath

Final dollar loss was estimated to be around \$30 million. Almost 7 million gallons of water were pumped at the fire, with an additional 2.5 million gallons from the fireboats. One of the unexpected consequences of the fire was a massive swarm of bees that descended on what was left of Warehouse D where the sugar was stored. It was reported that millions of the insects were attracted to the tons of syrupy residue left after the sugar melted.

The damaged warehouses were never rebuilt. The remaining warehouses continued in use until fire struck again in Warehouse B on Sept. 23, 1995. Warehouses A and C were eventually demolished a few years later.



*Western view of the fire, which had been burning approximately 30-45 minutes. All of the warehouses to the left would eventually be fully involved.*