

# Fertilizer plant fire in North Carolina threatens to ignite massive explosion, putting thousands at risk

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A dangerous fire which erupted Monday night at the Winston Weaver fertilizer plant in Winston-Salem, North Carolina continued to burn Wednesday, with emergency responders warning of a potential ammonium nitrate explosion arising from the blaze. Authorities immediately urged the evacuation of about 6,000 people, including Wake Forest University students and more than 200 inmates from a nearby prison.

Local officials have reported the cause of the fire remains unclear, while the prospect of an explosion continues to threaten the city. According to Winston-Salem's Fire Department, an evacuation notice was placed for those residing at least one-mile away from the plant to escape the still burning fire and residents of nearly 2,500 homes were ordered to leave the vicinity.

A Winston-Salem City council member who represents the North Ward district where the plant is located told local media Tuesday that about 500 tons of the ammonium nitrate was in the building and the rest is on a rail car on the back of the facility that contains about 100 tons of the chemical. And 5,000 tons of finished fertilizer was also found on-site.

The city's fire chief, Trey Mayo, also confirmed in a news conference Tuesday that hundreds of tons of ammonium nitrate were at the Weaver plant when the fire flared. Mayo compared it to a fire at a fertilizer storage and distribution plant in West, Texas in 2013, in which 240 tons of the same product exploded, destroying or severely damaging nearly 200 homes and killing 15 people.

Mayo referenced the 2013 disaster in Texas, one of the most devastating industrial fires ever recorded, to make clear how catastrophic and lethal Monday's fire could be. "If that doesn't convey the gravity of the situation and how serious folks need to take it," he said, "I don't know how else to verbalize that." Asked by a reporter how much of the nitrate chemical was "in line of fire" on Tuesday, Chief Mayo responded, "all of it."

At a news conference on Wednesday, Winston-Salem Fire

Department Division Chief Bobby Wade said the "possibility of explosion has not gone down from yesterday" despite initial assessments made by first responders that the explosion risk would be lower by this point. Fire Chief Mayo called the chemical compound "somewhat unpredictable." Ammonium nitrate is used to make fertilizer and can fuel fires under certain conditions, including through heat exposure.

Officials on Tuesday had been able to shut off two lines that were flowing natural gas in the vicinity of the fertilizer plant, the fire chief said, warning residents that they could be affected by a haze in the air. While the odor from the gas is considered an irritant and not necessarily toxic, Mayo warned people with "sensitive respiratory systems" should avoid being outside and forgo exercising, running and even walking.

Wade said in the early morning update on Wednesday that it was not clear when residents would be able to return to their homes. He warned that cold temperatures were causing the smoke from the fire to lie low and advised people with respiratory problems to stay indoors.

The Winston Weaver fertilizer plant is a subsidiary of Winston Weaver Company, Inc. which was founded in 1929 in Norfolk, Virginia. The plant's operations revolve around making fertilizers and plant food that is sold primarily at Lowe's stores across the southern US. According to the corporation's business directory, it has a total of 35 employees and generates about \$19.35 million in sales annually.

Like most fertilizer production plants, the Winston-Salem facility used the highly inflammable ammonium nitrate, a chemical which is commonly used in agricultural fertilizers. The compound has proven to be highly combustible and produces toxic oxides of nitrogen when it burns, according to the National Institute of Health. It is often used to make fertilizers and explosives, while also used in the production of freezing mixtures, matches, pyrotechnics (fireworks), and

as a nutrient in producing antibiotics and yeast.

Ammonium nitrate is frequently added to improve a fertilizer's nitrogen content and is favored as a cheap product to manufacture, making the chemical a popular alternative for fertilizer corporations seeking to cut costs and avoid more expensive nitrogen sources. Although touted as a compound that is relatively stable under most conditions, ammonium nitrate carries dangerous lethal potential if it comes into contact with an open flame or other ignition source, which can lead to a violent explosion. Ammonium nitrate was the chemical used in the 1996 Oklahoma City terrorist bombings.

The most infamous explosion involving ammonium nitrate was the 1947 Texas City disaster, the deadliest industrial accident in US history and one of world history's largest non-nuclear explosions. A tossed cigarette triggered a fire aboard a ship carrying about 2,300 tons of ammonium nitrate. This blast led to a chain reaction of fires and explosions in nearby ships and facilities, killing at least 581 people.

Given the potential deadliness of the chemical, safety regulations and inspections are critical for preventing nitrate-induced fires. Winston-Salem Fire Chief Mayo reported the company was inspected in December of last year and that no problems had been discovered at the plant. The only recently reported safety issue at the plant came from an Occupational Safety and Health Administration workplace investigation back in 2014 when a worker fell through the facility's rooftop while doing repairs. The company was given a slap on the wrist fine of \$9,000.

While Mayo claimed that Winston Weaver "passed" their December inspection, the fire chief acknowledged there was no fire code present when the 80-year-old fertilizer plant was built, and that the building was missing a working sprinkler system and alarm system, neither of which it was required to have installed.

Mayo's recognition of the lack of a sprinkler system is significant given his reference to the April 2013 explosion of West Fertilizer, a fertilizer plant in West, Texas. An investigation into the disaster by the US Chemical Safety Board at the time discovered the plant lacked a number of basic, common-sense safeguards and preventative measures, including a working sprinkler system.

The Chemical Safety Board censured both state and federal officials for having failed to issue regulations governing plants like West Fertilizer. The company allowed the fertilizer to be stored at the plant in wooden bins, in a wooden building without a sprinkler system.

A report submitted by the Safety Board to a Senate Committee was an indictment of the negligent and careless indifference of regulatory agencies, who act to whitewash

the profit-driven decisions of corporations. "To summarize, the safety of ammonium nitrate storage falls under a patchwork of U.S. regulatory standards and guidance - a patchwork that has many large holes," the report read.

Information that surfaced in the weeks following the West, Texas inferno pointed to severe regulatory and zoning failures which contributed to the tragedy. The hazardous material stored in the plant was located next to a school, park apartment complex and nursing home. In fact, the enforcement of health and safety regulations was abysmally lacking, a product of decades of deregulation and the gutting of government supervision of private companies.

OSHA officials at the time found five "serious" violations involving improper storage and handling of anhydrous ammonia and improper respiratory protection for workers. Just like at Winston Weaver, West Fertilizer was cited and fined for safety and environmental violations, but no serious attempts had been made to force the company to fix its operational problems.

The Chemical Safety Board document also noted how the close proximity of homes and other public spaces to the plant in West contributed to the widespread damage, death and injury caused by the explosion, while the lack of regulations put many communities at risk. The report contained numerous warnings concerning the dangerous locations of many other fertilizer plants both in Texas and around the US, stating that such a "risk to the public from a catastrophic incident exists at least within the state of Texas, if not more broadly."

The ongoing blaze in Winston-Salem is confirmation that nearly a decade later none of the recommendations issued by the Chemical Safety Board, including a revision of a federal chemical-safety program to include fertilizer-grade ammonium nitrate and requiring automatic fire-sprinkler systems for the chemical's indoor storage, have been seriously enforced. It is yet another exposure of how all social questions are subordinated to profit interests and the accumulation of wealth.



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