

April 25, 2013
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The New York Times

Texas Fertilizer Plant Fell Through Cracks of Regulatory Oversight

By MANNY FERNANDEZ and STEVEN GREENHOUSE



Chip Somodevilla / Getty Images

Debris littered a field near the West Fertilizer Company plant in West, Tex., where a blast last week killed 14 people. Investigators believe it may have been set off by ammonium nitrate stored there.

WEST, Tex. — In the moments after a fire broke out at a fertilizer plant here last week, some of the volunteer firefighters and other first responders who rushed to the scene appeared to have known that there were tons of dangerously combustible ammonium nitrate inside, but others did not.

Ammonium nitrate is the same chemical that Timothy McVeigh used in the Oklahoma City bombing in 1995. The nitrogen-rich chemical, a crystal-like substance that resembles coarse table salt, is popular with farmers as a fertilizer but in the wrong hands or in the wrong conditions it can turn explosive. Investigators say that the ammonium nitrate stored at the plant

appeared to have caused the subsequent explosion that killed 10 firefighters and at least 4 civilians.

The uncertainty over who was aware of the chemical at the plant and who was not, both at the site and in Washington, illustrates the patchwork regulatory world the plant operated in and the ways in which it slipped through bureaucratic cracks at the federal, state and local levels.

One week after the blast, investigators were still not sure how much ammonium nitrate was stored there, whether it had been stored properly and which agencies had been informed about it — even though a host of federal, state and local officials were responsible for regulating and monitoring the plant’s operations and products.

Many safety decisions — including moves in recent years to build homes, schools and a nursing home not far from the decades-old plant — were left to local officials who often did not have the expertise to assess the dangers. And the gaps in the oversight of the plant and a paper trail of records have left the essential question of how and why the ammonium nitrate ignited a mystery.

“The whole thing may have fallen through a number of regulatory cracks,” said a federal official whose agency helped regulate the plant.

The explosion was so powerful it leveled homes and left a crater 93 feet wide and 10 feet deep. Judging by the size of the crater and the extent of the damage — pieces of twisted metal landed in distant pastures, and ceiling tiles and lights shook loose in buildings two miles away — the explosion was more powerful than the Oklahoma City bombing, experts said.

The blast occurred shortly before 8 p.m. on April 17, about 20 minutes after a fire was reported at the plant, the West Fertilizer Company, in this rural town north of Waco, in McLennan County. It appeared to have been set off by the accidental eruption of ammonium nitrate, an official familiar with the investigation said. The plant did not make ammonium nitrate, but was a retail distribution center; the chemical was brought in by train and stored and sold out of large bins.

When properly stored, ammonium nitrate is difficult to ignite. Investigators are exploring a number of theories, the official said, about what could have created the intense heat or other unusual conditions necessary to detonate the chemical: whether a fire that broke out earlier in the day flared up again and grew in intensity; the possibility that piles of seed nearby could have burst into flame; and whether the collapse of the roof of a wooden building damaged in the fire contributed to the conditions.

“These are just working theories,” said the official, who spoke on the condition of anonymity because the person is not authorized to discuss the investigation. “None of these have enough substance for us to put forward as a scenario.”

Experts had speculated that another chemical at the plant — anhydrous ammonia, a potentially flammable gas used as a commercial fertilizer — played a role in setting off the ammonium nitrate. But the official said the plant’s two bullet-shaped anhydrous ammonia tanks were damaged but had not exploded. The blast crater is in the part of the plant where the ammonium nitrate was stored, the official said, though investigators do not yet know exactly how much of it was there at the time or how the storage bins were configured.

Under the Emergency Planning and Community Right-to-Know Act, the plant is required to send an annual report detailing the hazardous chemicals it keeps on site to three state and local groups — the Texas Department of State Health Services, the local fire department and a group of county emergency officials known as the Local Emergency Planning Committee.

Plant managers sent the report, called a Tier II report, to the state agency this year and said that in 2012 the facility had 540,000 pounds of ammonium nitrate stored, for sale to local farmers. That amount is more than 100 times that used in the Oklahoma City bombing. The report was also sent to the Local Emergency Planning Committee, a county official said. It was unclear if the plant sent the report to the West Volunteer Fire Department, but it appeared likely.

A foreman at the plant who was killed in the explosion, Cody Drago, 50, was also a volunteer firefighter. Other firefighters who died worked in the local government or were knowledgeable about farming and agricultural chemicals. Dr. George N. Smith, the medical director of the West ambulance service, said he was not aware that the plant stored ammonium nitrate. He was not alone, however — neither the federal Environmental Protection Agency nor the Homeland Security Department knew, either.

After the Sept. 11 attacks, Congress passed a law requiring plants that use or store explosives or high-risk chemicals to file reports with the Homeland Security Department so it can increase security at such facilities. That requirement includes any plant with more than 400 pounds of ammonium nitrate, but a Homeland Security official said that West Fertilizer had not filed such a report, even though it had 1,350 times that amount. The plant is not on the department's list of 4,000 facilities with high-risk chemicals, and one official said it might have been placed on that list if it had filed a report.

A tangle of agencies regulates plants like the one in West. Different agencies were assigned oversight for different chemicals there. Among the federal agencies responsible were the E.P.A., Homeland Security, the Occupational Safety and Health Administration and the Pipeline and Hazardous Materials Safety Administration. State agencies include the Texas Commission on Environmental Quality, the state chemist's office and the state health services department.

Under the Clean Air Act, the E.P.A. requires companies like West Fertilizer to file risk management plans when they use or store sizable quantities of anhydrous ammonia. In a 2011 filing, the plant said it had 54,000 pounds of that chemical. But the E.P.A. does not require those plans to include whether a facility uses or stores ammonium nitrate. In 2002, the federal Chemical Safety Board recommended to the E.P.A. that it broaden those risk management plans to include volatile hazardous chemicals similar to ammonium nitrate. That recommendation was never acted upon.

OSHA officials, meanwhile, acknowledged that they had last inspected the plant 28 years ago. Agency officials said the plant did not fall into its priority categories based on prior inspections, a lack of worker complaints and because it was not classified as high risk by the E.P.A.

Inspectors with the Texas Feed and Fertilizer Control Service, however, had made at least 35 visits to the plant since 2006, including one on April 5, 12 days before the blast. That agency regulates aspects of the fertilizer industry as part of the state chemist's office, and oversees the sale of ammonium nitrate in the state. The state chemist, Tim Herrman, said the law prohibits

him from disclosing information about the 115 facilities that hold permits to sell ammonium nitrate in Texas.

Paul Orum, a consultant on chemical safety, said **a major shortcoming** in the system of regulating chemical plants **is the reliance on self-reporting**. If a company like West Fertilizer fails to file a required report or misreports the risks it faces, **it is often hard for agencies, with their budgetary constraints and overstretched staffs,** to catch such errors. In its 2011 Risk Management Plan filed with the E.P.A., West Fertilizer did not check the box saying the plant might face a risk of fire or explosion.

In addition, safety experts say these inspections and penalties do not address a fundamental problem — the proximity of houses, schools and a nursing home to the fertilizer plant.

“You don’t build an apartment complex, an old folks home or a school that close to a facility that’s storing 270 tons of ammonium nitrate — that doesn’t make sense,” said Al Armendariz, the former E.P.A. director for Texas, and who now works for the Sierra Club. **“None of these agencies have or believe they have the authority — from the federal government or the state government — to require some kind of common-sense thing like a buffer zone.”**

Manny Fernandez reported from West, and Steven Greenhouse from New York.

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