2013 West Texas Ammonium Explosion

Jorge Pacheco

[Institutional Affiliation(s)]

Author Note

[Include any grant/funding information and a complete correspondence address.]

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# Overview

It was the 17th of April 2013, when 15 people got killed and 200 people were injured in an ammonium nitrate explosion in West Fertilizer Company distribution facility and storage located in West of Texas, for which emergency service responded immediately (Babrauskas, 2017). There are several companies which store fertilizer grade ammonium nitrate (FGAN), this material is stored under a certain temperature. Ammonium Nitrate, when exposed to higher temperature levels and shock waves it get explodes (Willey, 2017). The building of Adair Grain Co. dry fertilizer storage caught fire, for which local operators and firefighters reached to control the fire. This fire completely demolished building, and some population of a community of West, Texas while, this community was located as town in center. It is said that this was designed as a timber-framed structure and this was constructed in 1962. However, construction and building remained same for years, but there were some repairing, adjustments some additional changes were made.

According to some news sources, this incident was miss-interpreted, and it was mentioned that there was 270 tons of Ammonium Nitrate stored inside storage plant (Laboureur et al., 2016). This news was based on a regulatory report submitted by the company. Storage capacity of building was only 70 tons, however during explosion, a railcar loaded with 100 tons of AN was placed in near siding. It is said that this railcar moved to other places at the time of explosion which means that, it did not contribute to the incident. Proceeding with the discussion about building and its construction, it can be mentioned without any hesitation that this building was made with wood, plastic folding and a little steel was used for siding. The interior building was also designed with wood and there were bins placed for fertilizers which were made from wood. The only safety measure which this building had was placement of fire extinguishers. As the severity of explosion was higher and there were lesser chances of investigations to find a cause, but some investigations were carried to understand and identify reasons for this incidence. During process of investigation, no reliable factors were found but one of the main reason was mentioned to be electricity problem. There were also some hazardous and fire catching materials were placed in storage area of the company.

# Investigations by The State Of Texas, The ATF And The CSB

Investigation for incidents such as Ammonium explosion in West Texas is important to identify factors responsible for causing huge impacts. More than 15 people had to lose their lives, this explosion also made a negative impact on environment, and number of people lost their earning sources. To ensure work safety, it is important to construct such buildings having fire extinguishers, and no fire catching materials. In case of this fertilizer company it is suggested that these products of fertilizers must be formulated in a way to avoid any sensitive situation, and it should have lower levels of chances of explosions.

This incident was investigated by different investigation agencies from the State of Texas, the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) and Chemical Safety Board (CSB). These organizations are interconnected because they all work for safety and precautionary measures at workplaces and other public places. CSB started investigations for the incident because OSHA which works at federal level to ensure workers safety at their workplaces including exposures to chemicals and handling techniques. It is said that OSHA failed to investigate incidents like this therefore, CSB has to initiate an investigation. After occurrence of incident, owner of WFC was charged with a huge penalty but later due to severity of explosion, penalties were removed (Babrauskas, 2017). CSB suggested some major measurements that were necessary to ensure safety and it also suggested some standards for a company.

ATF was also given responsibility to investigate explosion, investigation for explosion in the company included some hypothetical experiments, tests, and observations about that incident. This federal agency followed an investigation and concluded that ATF was unable to find any suspect, and any clue. However, ATF did not release any investigation report to federal regulatory authorities. When it comes to the State of Texas, they also investigated this explosion in company, the reasons for explosion were cigarettes and damaged wiring in the plant.

## Interactions between these agencies

These investigation agencies collectively try to find and observe factors responsible for incidents like this. They come to a collective conclusion of their investigations and share a final report regarding incidents such as West Texas Ammonium explosion. These agencies concluded that the reason for this explosion was electricity mainly, secondly, designing of the company and thirdly smoking by workers.

## Negative Corpus

Reasons for explosions were not identified, however, there were some reasons which were identified, but still, they were not reliable. Factors responsible for this fire were reported as damaged wiring (electricity), smoking and construction of the company which was designed with wood which catches fire immediately. Some of investigation agencies did not report their final investigation, they mentioned that they were not able to find any particular reason but common reason for this explosion is said to be caused by electricity. It is responsibility of the State of Texas to ensure workers' safety and appropriate strategic planning for the construction companies which should be followed by them to not risk lives of people in future.

References

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