

More repeat incidents!

May 2016



From the US CSB final report, pictures captured from video of the West, Texas explosion.

On January 29, 2016 the US Chemical Safety Board (CSB) issued a report and video animation of the April 17, 2013 explosion in an agricultural chemical storage facility in West, Texas. The explosion caused 15 fatalities, more than 260 injuries, total destruction of the plant, and widespread destruction in the surrounding community.

A few days later, on February 5, 2016, the government of China released a report on the August 12, 2015 explosion in a chemical warehouse in Tianjin, China. That explosion resulted in more than 170 fatalities, over 700 injuries, and over a billion dollars in financial loss.

Both of these incidents occurred in warehouses which stored ammonium nitrate (AN), a common fertilizer, along with a variety of other chemicals. In both incidents, there was a fire which exposed AN to high temperature. The CSB report states that “AN exhibits three main hazards in fire situations”: uncontrollable fire, decomposition with formation of toxic gases, and explosion.

Did you know?

- The CSB report on the West, Texas explosion identified 32 other explosions involving AN going back to 1916 (including the 2015 Tianjin, China explosion). These explosions caused nearly 1,500 fatalities and thousands of injuries.
- The CSB list of AN explosions includes an April 16, 1947 explosion of the ship *Grandcamp* in Texas City, Texas which caused approximately 500 fatalities and 3,000 injuries. This incident is considered to be the deadliest industrial disaster in US history.

What can you do?

- You may not handle AN in your plant, and you may not handle other materials with such high damage potential. However, if you use any hazardous materials, or if your process operates at hazardous conditions, you should understand what incidents have happened in the past with the materials and process conditions in your plant.
- Ask engineers, managers, and veteran employees to share information about past incidents in your plant, and in other plants like yours. Understand what is being done to prevent similar incidents.
- For other examples of repeated incidents, see the February 2014 and February 2016 *Beacons*.
- Search the Internet for past incidents which have occurred with the materials and processes in your plant.

Learn from history so it doesn't repeat!

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