

The West Fertilizer accident: A road map of AN and NH₃ regulations for ag retailers



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On April 17, a massive explosion at the West Fertilizer Plant in the town of West, Texas, killed at least 15 people and injured more than 160 people. The impact of the blast was equivalent to a 2.1 earthquake and felt for miles, but for the Texas community and ag retail industry, the repercussions will resonate for years.

Although there is no indication that the blast was anything other than an industrial accident, authorities are treating the scene as if it were a criminal act. Many media reports try to claim that a lack of regulation of anhydrous ammonia (NH₃) and ammonium nitrate (AN) is the problem, but until the Chemical Safety Board (CSB) establishes the root cause, it's too dangerous to speculate. *[At the time of this publication little information was available to determine the root cause of the explosion. West Fertilizer is not a member of ARA.]*

Anhydrous ammonia and ammonium nitrate are heavily regulated by various federal and state agencies across multiple areas of expertise: terrorism (Department of Homeland Security), workplace safety (Occupational Safety and Health Administration), air quality (Environmental Protection Agency), highway safety (Department of Transportation). And, this doesn't take into account voluntary consensus standards for products adopted by retailers created by the National Fire Protection Association (NFPA) and American National Standards Institute (ANSI).

ARA works closely with federal and state agencies to further educate and provide services to support its members in their quest to maintain regulatory compliance, a profitable business and help feed the world. The following sections of this article provide a roadmap of ammonium

nitrate (AN) and anhydrous ammonia (NH₃) regulations that ag retailers need to comply with.

OSHA: WORKPLACE SAFETY

OSHA ensures that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees along with first responders. OSHA regulates the storage of AN and NH₃ and requires emergency response plans, emergency response training and compliance with all OSHA hazardous communication standards.

Ag retailers are required to provide material safety data sheets (MSDSs or SDSs) and emergency response plans to first responders so they know how to handle the hazard. As many retailers know, SDSs are an important component of product stewardship and occupational safety and health. It provides workers and emergency personnel with procedures for handling or working with that substance in a safe manner (NH₃ and AN are included). Information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment and spill-handling procedures are condensed into a one to two page fact sheet.

DHS: TERRORISM PREVENTION

DHS regulates Chemical Security Anti-Terrorism Standards (CFATS) that present high levels of security risk and also regulates the sale and transfer of AN by an AN facility to prevent the misappropriation or use of AN in an act of terrorism.

DHS regulates AN and NH₃ fertilizers as a chemical of interest under CFATS for different threats. Under CFATS, any facility storing more





Daren Coppock, ARA president and CEO, participated in a panel discussion about the West Fertilizer Co. explosion on the April 23 Diane Rehm Show on National Public Radio.

address hazardous materials classification, packaging, hazard communication, emergency response information and training.

AN is classified as a 5.1 oxidizer. As a 5.1 oxidizer, AN in quantities of 1,000 lbs. or more must be placarded and meet certain container specifications. Companies that transport AN must train employees, register with DOT and comply with all other applicable PHMSA requirements for hazardous materials. DOT also considers AN to pose a security risk; therefore, all placarded loads must have

than 400 lbs. of AN (or 2,000 lbs. of agricultural grade AN, which normally has less than 0.2 percent combustible organics) is considered a theft threat and, therefore, must submit a "top screen survey application" to DHS. NH_3 is a toxic chemical release threat—and as such has a screening threshold quantity (STQ) of 10,000 lbs.

A top screen is used to determine whether the facility presents a high level of security risk. If so, the facility is required to submit a security vulnerability assessment (SVA) to DHS. The department reviews the SVA and advises the facility as to its status as a covered facility. DHS has established four tiers of security risk—Tier 1 is for the highest risk facilities and Tier 4 is for the lowest risk facilities. A facility that is tiered in one of the four tiers must submit a site security plan. If DHS determines a facility is not a threat, no tier will be assigned, and DHS will advise the facility that no further action is required. To our knowledge, not one ag retailer has been inspected, but lower risk facilities such as ag retailers are scheduled for inspection starting this year.

DHS regulates the sale and transfer of AN by each facility that handles this product. This is done to prevent the misappropriation or use of AN in an act of terrorism. However, the rule has been held up at DHS in the rule making process since 2008, with expectation of a final rule by the end of 2013.

DOT: HAZMAT TRANSPORTATION

DOT regulates the transportation of hazardous materials such as AN, which is administered by the Pipeline and Hazardous Material Safety Administration (PHMSA). The DOT regulations govern the transportation of hazardous materials by highway, rail, vessel and air. The regulations

a security plan. Motor carrier drivers must have a commercial driver's license with a hazardous materials endorsement.

EPA: AIR QUALITY STANDARDS

EPA regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

Under Section 112(r) of the Clean Air Act, ag retailers with more than 10,000 lbs. of NH_3 must develop a risk management plan that documents and describes a facility's hazard assessment and response plan. That hazard assessment mandates that facilities document the worst case scenario for a chemical accident and the consequences of that scenario and implement accident prevention and emergency response programs.

STANDARDS: ANSI AND NFPA

The NFPA has developed a code for storage of AN. By itself, AN is not combustible. However, AN is an oxidizer, and it can accelerate the burning of fuels when it is involved in a fire. Code 490 applies to the storage of AN, which includes storage in containers, storage in bulk, contaminants and fire protection. NFPA 490 recommends that should a fire break out where AN is stored, emergency responders should apply large volumes of water as quickly as possible.

According to the ANSI Standard for Storage and Handling of NH_3 , the conditions favorable for ignition are seldom encountered during normal operations due to the high ignition temperature required.



PARTNERSHIPS THAT MATTER

ARA recently forged a partnership with the FBI and has been working with them on security education and outreach efforts. FBI representatives have made presentations at ARA meetings and exhibited at the 2012 ARA Conference.

Several years ago, ARA joined The Fertilizer Institute (TFI) in putting together the “Know Your Customer” Campaign. This campaign was initiated to prevent the misuse of nitrate-based fertilizer and provides retailers with suggested guidelines to follow regarding the sale of these products.

Additionally, tools like the Asmark Security Vulnerability Assessment (SVA) help ag retailers identify and evaluate potential security threats, risks and vulnerabilities. ARA has been working with Asmark, TFI and CropLife America on this program since 2001, and it was set up well before the DHS CFATS program was established.

ARA also participates in the TFI Security Task Force that works with JIEDDO—the Joint Improvised Explosive Device Defeat Organization,

a group within the Department of Defense.

ARA is also a member of the Chemical Sector Coordinating Council (CSCC), one of 18 critical infrastructure committees established to facilitate effective coordination between the private sector and federal, state, local, territorial and tribal governments.

A PATH FORWARD

ARA members take pride in offering products and services to their farmer customers that help provide food, feed, fuel and fiber to the world. While it's too dangerous to speculate about the root cause of the West Fertilizer accident, ag retailers continue to comply with NH₃ and AN regulations in striving toward the most efficient, safe and best practices to accomplish their goals.

ARA continues to carefully monitor safety and security issues and continues to work with government agencies and allied organizations to apply any lessons learned so a tragic incident, like the facility explosion in Texas, will never happen again. **AG**

Guide offers retailers information on seed treatment stewardship



BY MICHELLE HUMMEL, VICE PRESIDENT OF MARKETING & COMMUNICATIONS

The Agricultural Retailers Association (ARA) is proud to endorse a new tool for the agriculture industry, *The Guide to Seed Treatment Stewardship*. The guide is now available to download at www.seed-treatment-guide.com, and it provides agricultural retailers, farmers and seed companies with critical information and up-to-date guidelines for managing treated seeds effectively to minimize risk of exposure to non-target organisms such as pollinators, water supplies and animals.

The Guide to Seed Treatment Stewardship is the product of an industry-wide collaboration between seed companies, seed treatment providers and universities. It was developed using data collected from all over the world. The American Seed Trade Association (ASTA) and CropLife America (CLA) led efforts to develop the guide, which has been endorsed by ARA, the American Soybean Association, the National Corn Growers Association and the American Farm Bureau Federation.

“The guide serves as an all-in-one resource that addresses every stage of a seed’s journey from treatment to planting,” said ASTA President and CEO Andrew LaVigne. “It’s designed to be

convenient, easy-to-understand and useful to the entire seed and crop production value chain.”

The guide contains recommendations for such processes as planting of treated seed, safe use of seed treatment products, safe handling and transport of seed, selection of treatment product, treated seed labeling and storage of treated seed.

“ARA participated in the review process of this guide, and we’re excited that this important tool is now available,” said Daren Coppock, ARA president and CEO. “The use of seed treatments continues to grow in our industry and enables farmers to realize higher yields and healthier crops. It’s important that agricultural retailers know the best practices associated with using this new technology when they sell these products to customers.”

The guide, which also includes a seed treatment glossary and an exhaustive list of resources, has been shared with EPA and USDA, both of whom have applauded the industry’s initiative in this effort.

For more information on seed treatment stewardship and the new guide, visit www.seed-treatment-stewardship.com. The guide is a “living document” that will be expanded with important information on an as-needed basis. **AG**

