



## U. S. Chemical Safety and Hazard Investigation Board RECOMMENDATIONS STATUS CHANGE SUMMARY

<b>Report:</b>	West Fertilizer Fire and Explosion
<b>Recommendation Numbers:</b>	2013-2-I-TX-R7 2013-2-I-TX-R8
<b>Date Issued:</b>	January 28, 2016
<b>Recipient:</b>	Federal Emergency Management Agency (FEMA)
<b>New Status:</b>	R7: Closed – Exceeds Recommended Action R8: Closed – Exceeds Recommended Action
<b>Date of Status Change:</b>	January 11, 2017

### Recommendation(s) Text:

#### CSB Recommendation No. 2013-02-I-TX-R7:

*Through a new or existing program and in conjunction with training partners, create and implement a competitive funding mechanism to provide training to regional, state, and local career and volunteer fire departments on how to respond to fire and explosion incidents at facilities that store fertilizer grade ammonium nitrate (FGAN). Continue to use available funding to ensure training effectiveness.*

#### CSB Recommendation No. 2013-02-I-TX-R8:

*During the proposal review process for the program, ensure that the FGAN training includes multiple delivery methods to enable a broad reach. Training should allow for instructor-led, web-based, and train-the-trainer courses; initial orientation; and refresher training. Training also should accommodate both resident and mobile capabilities to facilitate flexible delivery.*

*Objectives of the selected training course should address the following:*

- a. Previous FGAN fire and explosion incidents, incorporating lessons learned*
- b. Hazards posed by other materials and chemicals stored near FGAN, including FGAN incompatibility with those materials and chemicals*
- c. Pre-incident planning for fires involving FGAN*
- d. On-scene emergency response and decision-making requirements for FGAN fires, including risk assessment, scene size-up, and situational awareness*
- e. National Incident Management System and Incident Command System.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

On April 17, 2013, an explosion and fire occurred at the West Fertilizer Company (WFC), a fertilizer blending, retail, and distribution facility in West, Texas. The violent detonation of fertilizer grade ammonium nitrate (FGAN) fatally injured 12 emergency responders and three members of the public. Local hospitals treated more than 260 injured victims, many of whom required hospital admission. The blast completely destroyed the WFC facility and caused widespread damage to more than 150 offsite buildings.

As part of its investigation, the CSB found that curriculum manuals used for hazardous materials (HAZMAT) training and certification of firefighters place little emphasis on emergency response to storage sites containing FGAN. This is true for both the federal and Texas HAZMAT training and certification programs. In addition, lessons learned from previous FGAN-related fires were not shared

with other fire departments, including the West Volunteer Fire Department. If previous lessons learned had been applied at West, the firefighters and emergency personnel who responded to the incident might have better understood the risks associated with FGAN-related fire and acted accordingly.

While many federal and state grants support the needs of firefighters and fire departments, these grants often focus more on resources, such as personal protection equipment or firefighting equipment, rather than training. As a result, the CSB made recommendations to the Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS). This status change summary addresses Recommendations No. 2013-02-I-TX-R7 and 2013-02-I-TX-R8 related to awarding funds associated with FGAN hazards awareness training.

#### B. Response to the Recommendations

On July 18, 2016, FEMA posted a notice of funding opportunity (NOFO) to grants.gov.<sup>1</sup> The NOFO for the grant stated that the funding provides between four to eight recipients with a total of \$11,521,000 for training. The grant period is from October 1, 2016 through September 30, 2019, with the option for FEMA to extend the period of performance. The NOFO states that training may be provided in various formats including web-based training, instructor-led courses conducted in classrooms, and seminars or workshops which measure knowledge change, in accordance with Recommendation No. 2013-02-I-TX-R8.

The NOFO stated that grant applications shall be in one of the four focus areas, of which Focus Area two is HAZMAT. In addition to HAZMAT and in response to the CSB's recommendation, HAZMAT applicants must propose training that focuses on the issues related to FGAN. The CSB's West Fertilizer Final Investigation report is referenced as documentation with which the training must be consistent. The elements that must be addressed in the training development and dissemination address all bullet points outlined in Recommendation No. 2013-02-I-TX-R8.

On September 16, 2016, FEMA awarded two grants of a million dollars each to the Georgia Tech Research Institute (GTRI) and the International Association of Fire Fighters (IAFF) to develop and deliver HAZMAT training, focusing on FGAN hazards in accordance with recommendation 2013-02-I-TX-R7. The responsiveness and speed with which FEMA acted upon the CSB's recommendations is highly noteworthy, and coupled with the grant award amounts, clearly demonstrates the flexibility, commitment, and responsiveness of FEMA to the lessons learned from the West investigation.

#### C. Board Analysis and Decision

The Board believes that FEMA has gone above and beyond the expectations for these recommendations. Therefore, the Board voted to designate Recommendations **Nos. 2013-02-I-TX-R7 and 2013-02-I-TX-R8** with the status "**Closed – Exceeds Recommended Action.**"

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<sup>1</sup> <http://www.grants.gov/web/grants/view-opportunity.html?oppId%3D286260>