



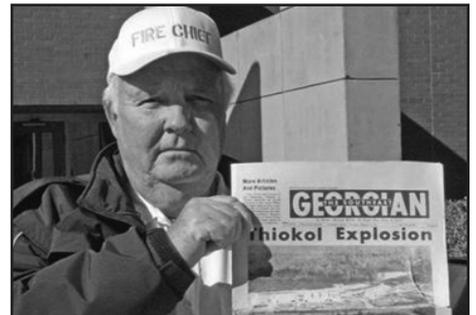
Summer 2013

A PUBLICATION OF THE TENNESSEE DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT

Military Flare Plant Explosion Kills 29 in Georgia

The Thiokol Chemical complex in Woodbine, Georgia, was awarded a contract by the U.S. Army to manufacture military flares for use in the Vietnam War. Magnesium is the primary component in flares. The element generates bright white light when it burns at a temperature of approximately 2,500 °F (1,370 °C). It cannot be extinguished by normal methods; water combines with magnesium to release hydrogen gas, which also burns; carbon dioxide (CO2) is not effective, either. On Wednesday, February 3, 1971, at the plant 30 miles north of Jacksonville, Florida, large quantities of flares and their components in building M-132 were ignited by a fire; detonation then occurred. M-132 was a large, windowless, concrete block building shaped like a "T". Three processes were used in flare manufacturing, all located within the structure. Approximately 80 employees worked there, predominantly black women.

A fire originated at the work station where an ignition chemical was manually added to other chemicals prior to forming ignition pellets. Small fires occurred occasionally, but they had always been quickly extinguished, so there was no panic when this fire began. However, this one was different; it jumped to the material on the conveyor belt and spread up and down the production line, setting fire to ignition and illuminant pellets stored in containers near the line before reaching the "cure" room and a storage room, which contained nearly five tons of processed material, pellets, and 56,322 assembled flares. During the 3-4 minutes after the fire began, all the workers were able to exit the building, but didn't leave the area because they were unaware of a potential explosion. The survivors recalled two minor concussions before the enormous explosion when the contents of the "cure" and storage rooms detonated, followed by a huge fireball. A supervisor in another building 300 yards away heard the fire alarm and walked outside. He had served in Vietnam, but said the explosion was worse than his war experience.



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Important Information About Together with TOSHA Distribution Change

This is the last edition of Together with TOSHA, the official newsletter of TOSHA that you will receive via the U.S. Postal Service. Hereafter, the newsletter will be delivered in electronic format exclusively. The newsletter, which is published quarterly, will be posted on TOSHA's Web page on the following schedule:

Edition	Released each year
Winter Edition	February 1
Spring Edition	April 15
Summer Edition	July 15
Fall Edition	October 15

The Web page where you will find the newsletter is www.tennessee.gov/labor-wfd/tosha.html. This change will allow for the inclusion of more timely information in the newsletter, decrease the costs associated with it, and overall serve the employers and employees of Tennessee more effectively. If you would like a copy of the newsletter emailed to you, send your e-mail address to jennifer.farrar@tn.gov.



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Military Flare Plant Explosion Kills 29 in Georgia (continued)

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The explosion and fire killed, dismembered, or injured dozens of employees. Bodies were hurled 400 feet and debris was found 4,200 feet (1,300 m) from building M-132, which was leveled. Three other nearby buildings were severely damaged, and the fire engulfed nearby pine trees, which started a forest fire that eventually scorched 200 acres. Windows were shattered 11 miles from the site, and the explosion was heard for 50 miles around.

Twenty-four persons were killed in the blast or died soon after. Five others later died from their injuries, primarily burns, for a total of 29 deaths. At least 50 individuals suffered debilitating injuries, including burns and limbs severed by the explosion.

References: 604 F.2d 417 United States Court of Appeals Fifth Circuit, October 15, 1979; Jackson, Gordon: "Memories still shake" Florida Times-Union, February 4, 2001



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Short summary of key EMPLOYER responsibilities under the TOSH Act

- ❑ Provide a workplace free from serious recognized hazards
- ❑ Examine workplace conditions to make sure they conform to applicable TOSHA standards.
- ❑ Make sure employees have and use safe tools and equipment and properly maintain this equipment.
- ❑ Use color codes, posters, labels or signs to warn employees of potential hazards.
- ❑ Establish or update operating procedures and communicate them so that employees follow safety and health requirements.
- ❑ Employers must provide safety training in a language and vocabulary that workers can understand.
- ❑ Employers with hazardous chemicals in the workplace must develop and implement a written hazard communication program and train employees on the hazards they are exposed to and proper precautions (a copy of safety data sheets must be readily available). See the OSHA page on Hazard Communication.
- ❑ Provide medical examinations and training when required by TOSHA standards.
- ❑ Post, at a prominent location within the workplace, the TOSHA poster informing employees of their rights and responsibilities.
- ❑ Report to the nearest OSHA office within eight hours any fatal accident or one that results in the hospitalization of three or more employees.
- ❑ Keep records of work-related injuries and illnesses. (Note: Employers with 10 or fewer employees and employers in certain low-hazard industries are exempt from this requirement.)
- ❑ Provide employees, former employees and their representatives access to the OSHA Form 300. On February 1, and for three months, covered employers must post the summary of the OSHA log of injuries and illnesses (OSHA Form 300A).
- ❑ Provide access to employee medical records and exposure records to employees or their authorized representatives.
- ❑ Provide to the OSHA compliance officer the names of authorized employee representatives who may be asked to accompany the compliance officer during an inspection.
- ❑ Not discriminate against employees who exercise their rights under the Act.
- ❑ Post OSHA citations at or near the work area involved. Each citation must remain posted until the violation has been corrected, or for three working days, whichever is longer. Post abatement verification documents or tags.
- ❑ Correct cited violations by the deadline set in the TOSHA citation and submit required abatement verification documentation.

Employers: Use this to take a look at your company's safety and health program and determine if you are meeting your responsibilities.

Crane Operator Certification Requirements **UPDATE**

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On May 22, 2013, OSHA announced that it is proposing to extend the compliance date for the crane operator certification requirement by three years to Nov. 10, 2017. The existing phase-in requirement that employers ensure that their operators are qualified to operate the equipment will be extended to the same date.

The final OSHA standard on requirements for cranes and derricks in construction work was issued on Aug. 9, 2010. TOSHA adopted the standard as published by OSHA. The standard requires crane operators on construction sites to meet one of four qualification/certification options by Nov. 10, 2014. After OSHA issued the standard, a number of parties raised concerns about the qualification/certification requirements prompting OSHA to consider addressing these concerns through a later, separate rulemaking. The agency is proposing to extend the compliance date so that the qualification/certification requirements do not take effect during potential rulemaking or cause disruption to the construction industry. Note that this is only a PROPOSAL at this date. If this affects your business, you should consult www.osha.gov for information as to when this extension might be a reality.

OSHA held three stakeholder meetings on operator certification/qualification issues in April 2013 and posted detailed notes of the meetings at <http://www.osha.gov/cranes-derricks/stakeholders.html>, a Web page devoted to the stakeholder meeting. The agency also plans to post a list of frequently asked questions on its Cranes and Derricks in Construction Web page to provide additional clarification and address some comments and concerns raised by stakeholders.



TOSHA Tips

Condition:

The employer did not maintain records of training sessions where employees were trained on hazardous chemicals they are exposed to, or may be exposed to, in a foreseeable emergency.

Potential Effects:

Training conducted by the employer should be documented by recording the identity of those trained, date of the training, and a brief description of the training. If training is not conducted adequately, the effects can be headaches, dizziness, upset stomach, irritation to the eyes, nose, throat and/or lungs, dermatitis, burns, fever, unconsciousness, damage to bodily organ, skin sensitization, reproductive effects, reproductive effects, cancer, death.

Standards:

TDL rule 0800-1-9-.07(4)

Recommended Action:

The above requirement is a part of the Tennessee-Right-To-Know (RTK) Law (Tennessee Department of Labor and Workforce Development Rule 0800-1-9). The RTK Law is a companion to the TOSHA Hazard Communication Standard and contains a few requirements not found in the later rule. The requirement for training records is for Tennessee employers only and will not be found in the Hazard Communication Standard. The requirement is enforced in Tennessee by TOSHA compliance officers.

L EARN & LIVE **A TOSHA Case File Summary**

A 47-year-old co-owner in a business died when he became locked in a walk-in cooler containing a large amount of dry ice. Electrical power on a Friday evening was lost to the building complex where the business was located. Between 400 and 500 pounds of dry ice was purchased to prevent the loss of food in the cooler. The dry ice was placed in the cooler around midnight. On Sunday afternoon, the electrical power was restored to the building and the victim entered the business Sunday night to determine if the food had been saved. When he entered the walk-in cooler, the door closed behind him and locked. The inside lock-release mechanism was broken and had been missing for an extended period of time. The hole in which the release shaft should have been located was filled with putty to prevent loss of cold air; the release mechanism was on a shelf outside the cooler. The victim was unable to exit the cooler and was discovered on Monday morning. He had succumbed to the high levels of carbon dioxide in the cooler from sublimation of the dry ice.



To Prevent Such an Incident:

1. Ensure that employees are not exposed to an airborne concentration of carbon dioxide listed in Table Z1-A in excess of 30,000 ppm as a 15-minute Short Term Exposure Limit.
2. Develop and implement a written hazard communication program.
3. Obtain and make available to employees a material or safety data sheet for each hazardous chemical which they use.
4. Provide information and training to employees on the hazardous chemicals in their work area at the time of their initial assignment and whenever a new hazard is introduced.
5. Always furnish employment and a place of employment that is free from recognized hazards that can cause death or serious physical harm to employees.