DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

Together With TENNESSEE OSHA

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A series of sugar dust explosions at the Imperial Sugar manufacturing facility in Port Wentworth, Georgia occurred on February 7, 2008.

Georgia Dust Explosion

On February 7, 2008, at about 7:15 p.m., a series of sugar dust explosions at the Imperial Sugar manufacturing facility in Port Wentworth, Georgia, resulted in 14 worker fatalities. Eight workers died at the scene, and six others eventually succumbed to their injuries at the Joseph M. Still Burn Center in Augusta, Georgia. Thirty-six workers were treated for serious burns and injuries; some caused permanent, life-altering conditions. The explosions and subsequent fires destroyed the sugar-packing buildings, palletizer room, and silos and severely damaged the bulk train car loading area and parts of the sugar-refining process areas.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) determined that the first dust explosion initiated in the enclosed steel belt conveyor located below the sugar silos. The recently installed steel cover panels on the belt conveyor allowed explosive concentrations of sugar dust to accumulate inside the enclosure. An unknown source ignited the sugar dust, causing a violent explosion. The explosion lofted sugar dust that had accumulated on the floors and elevated horizontal surfaces, propagating more dust explosions through the buildings. Secondary dust explosions occurred throughout the packing buildings, parts of the refinery, and the bulk sugar-loading buildings. The pressure waves from the explosions heaved thick concrete floors and collapsed brick walls, blocking stairwell and other exit routes. The resulting fires destroyed the packing buildings, silos, and palletizer building and heavily damaged parts of the refinery and bulk sugar loading area. The major fires in the buildings were extinguished the next day, but small fires continued burning for many days. The granulated sugar fires in the 105-foot tall silos continued to smolder for more than seven days before being extinguished by a commercial industrial firefighting company.

Reference: Investigation Report, Sugar Dust Explosion & Fire, U.S. Chemical Safety & Hazard Identification Board, Report Number 2008-05-1-GA, September 2009

TSHC TENNESSEE SAFETY AND HEALTH CONGRESS

The 36th Annual Tennessee Safety and Health Congress

July 15-17, 2013

Don't Forget! Make Your Plans Now to Attend
the Best Safety and Health Meeting in the Southeast!

Safety and health professionals throughout the southeast will be gathering once again for workshops, safety and health networking, legislative updates, work, and some fun on the side at the Gaylord Opryland Hotel and Convention Center in Nashville

Features of the 2013 Congress

- Workshops on occupational safety, occupational health, and environmental safety
- Top-notch keynote speakers
- The Mayberry Deputy
- Large exhibition area with more than 100 vendors
- Free stuff—prizes, give-aways, vacation trips, and maybe even some MONEY!

Co-sponsored by Tennessee OSHA and American Society of Safety Engineers

Portable Ladder Safety

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Statistics suggest that the working men and women in America abuse and misuse ladders in the workplace as a rule rather than an exception. These accidents can be avoided. The fact is, a ladder is one of the simplest, most easy-to-use tools available to workers and the general public.

Most ladder accidents are the result of careless or improper ladder usage, making a well designed and well-taught ladder safety program well worth the effort. Remember that practically all falls from ladders can be traced to using them in an unsafe manner. When a fall occurs, the person who falls usually gets hurt. This means that you must observe ladder safety rules because you are the one who will get hurt if you don't. Others may be injured also.

OSHA requires that safe equipment be furnished for use. But it is the responsibility of the user to USE THIS SAFE EQUIPMENT SAFELY. A fall from a ladder can kill. It can disable a person for the rest of his life, or it can injure him so severely that earning power is cut off for a long time. None of these is a happy prospect.

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Inquiries regarding Together With TOSHA should be directed to the TOSHA Division Training Section: (615)741-5726

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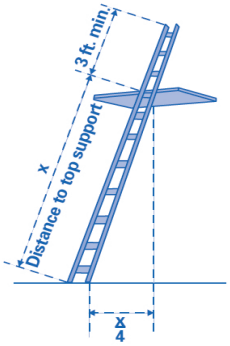
OSHA has a Quick Card on portable ladder safety. Here are a few pointers listed on the card. The entire card can be accessed at www.osha.gov under the Publications tab.

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.
- Always maintain a three-point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing (see diagram).


3-Point Contact

- Use a ladder only on a stable and level surface
- An extension or straight ladder used to access an elevated surface must extend at least three feet above the point of support (see diagram). Do not stand on the three top rungs of a straight, single, or extension ladder.

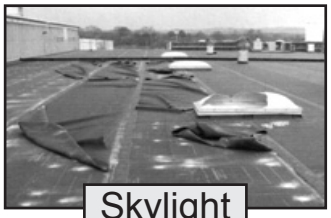


- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface (see diagram).
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.
- Be sure that all locks on an extension ladder are properly engaged.
- Do not exceed the maximum load rating of a ladder. Be aware of the ladder's load rating and of the weight it is supporting, including the weight of any tools or equipment.

More on Fatalities Due to Fall Hazards in Tennessee

Failure to use fall protection was the leading cause of fall fatalities in the State of Tennessee for the period of 2006 through 2010, accounting for 29% of the fall fatalities. Working on improper working surfaces was the second leading cause of fatalities in Tennessee during the same time period with 14 fatalities. Improper working surfaces were those identified as surfaces not intended or designed for use as a walking/working surface. This category included instances such as a fall from a dumpster, a fall from a barn loft, five falls through skylights, and falls from vehicles. Vehicles included the catwalk on a brush collection truck, top cab of a tractor, pick up truck tailgate, and the ramp of a parked moving van.


Floor Hole


Skylight

The most common occurrence in this category was falls through skylights. There was also a fall through a floor opening. Six Tennesseans lost their lives through falls from such locations. These two hazards are also very similar in nature and are a common hazard. Identification and elimination of floor opening/skylight hazards hazard is simple and will help keep Tennessee workers alive and on the job. Failure to secure skylights and floor openings is a significant failure of any safety program and is viewed as such by TOSHA.

Bureau of Labor Statistics

Preventing Backover Injuries and Fatalities

The Bureau of Labor Statistics (BLS) reported that 79 workers were killed in 2011 when vehicles that were backing up, especially those with an obstructed view to the rear, crushed them against an object and/or struck or rolled over them. A search of OSHA's database identified 358 fatal backover incidents from 2005 to 2010. Several of these fatalities occurred in Tennessee.

Because of these numbers, OSHA is gathering information in hopes to evaluate backover risks across various industries and to determine whether or how backovers may be prevented by new technology or other methods and how effective those measures are. OSHA published a Request for Information (RFI) on backover hazards in the Federal Register on March 29, 2012 (77 FR 18973). OSHA received comments from 32 individuals and organizations, and these are available on www.regulations.gov under docket OSHA-2010-0059. Stakeholder meetings are also being held.

Many commercial or construction vehicles have audible alarms that sound when the vehicle is put into reverse and backs up. OSHA has three construction safety standards that require backup alarms or spotters when backing a vehicle with an obstructed view to the rear: 29 CFR 1926.601(b)(4) covers motor vehicles; 1926.602(a)(9)(ii) covers material handling equipment; 1926.952(a)(3) covers equipment used in power generation and transmission construction. For general industry 1910.269(p)(1)(ii) provides similar requirements for vehicular equipment operated at off-highway job sites.

New technologies have been developed to address backing hazards, including cameras and proximity sensing technology, such as radar and sonar, and new types of audible alarms that focus the alarm's sound or are combined with lights. In addition, internal traffic plans that control the flow of traffic and limit backing can help prevent backovers.

LEARN & LIVE

From the Public Sector Files

A 48-year-old public works employee drowned when he entered a drainage culvert to determine why water was not flowing. A complaint was lodged that a large amount of water was flooding the street at a specific street intersection. Two other workers went to the intersection to determine why the flooding was occurring. They observed water flowing over the walls of a creek bed and running into the street, but they did not see any brush or debris. At the other end of the culvert, they found only a small amount of water flowing out of the culvert. One of these employees crawled into the culvert to see what was preventing the water from flowing through the culvert. The victim and his co-worker, who had been picking up debris, arrived at the scene. The worker inside the culvert exited and reported that he could not see what was causing the blockage. The victim stated that he would go inside the culvert to see if he could determine what the problem was. He was told that if he did find the blockage he was not to try and dislodge it himself, but report back and they would use a chain to pull it out. The victim was inside the culvert for about 10 minutes when the flow increased and a small amount of leaves came out of the culvert. The co-workers on the scene called out for the victim for approximately 25 to 30 minutes, but got no response. Finally, one of the co-workers entered the culvert and came back out stating it was too dark to see without a flashlight. After a flashlight was obtained, he again entered the culvert and crawled about 20-to-30 feet inside where he found the body of the victim. The victim was face down in the culvert with debris on and around him. Emergency services were called and the victim was transported to a local hospital where he was found to be deceased.

To Prevent Such an Incident:

1. Evaluate the workplace to determine if any spaces are permit-required confined spaces.
2. Inform exposed employees, by posting danger signs or by any other equally effective means, of the existence and location of and the danger posed by the permit spaces.
3. When the employer decides that employees will enter permit spaces, develop and implement a written permit-space entry program.

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