



National Grain and Feed Association

Plant Operations Bulletin

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NGFA Reminds Industry About Safe Bin Entry Procedures, Availability of Employee Training Materials

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[Editor's Note: This is a reprint of a previous edition of NGFA Plant Operations Bulletin published March 13, 2008 on the Occupational Safety and Health Administration's (OSHA) grain handling safety standard's regulatory requirements for entry into confined spaces, including bins. It also details the employee education and training materials available from the NGFA on this important safety matter, with an order form provided on the reverse side. These issues have taken on renewed importance given recent engulfment incidents and OSHA's strong enforcement policies, including heavy proposed fines for violations and potential criminal penalties. (See the related article on page 1 of the accompanying NGFA Newsletter, Aug. 12, 2010.)]

With the recent increase in fatalities and injuries attributable to engulfment of employees and contractors in grain bins, the NGFA is reminding members about common entrapment hazards, applicable Occupational Safety and Health Administration (OSHA) standards, and NGFA employee training materials that managers and supervisors can use to help prevent future incidents.

Flowing grain and feed is a life-threatening hazard for commercial grain, feed and processing facilities that can occur in both confined and non-confined spaces. Statistics show that 92 percent of victims who are fully engulfed do not survive. Historically, nearly 70 percent of engulfment incidents have occurred in farm bins. Confined space entrapment hazards usually take three forms:

- ▶ **Unloading:** Individuals may be pulled into the flow of grain during unloading of grain storage structures.
- ▶ **Avalanche:** Occurs when a mass of grain held in position by crusting breaks free and seeks its lowest level.
- ▶ **Bridging:** Forms when grain or other product is drawn off from beneath a top layer of compacted or crusted grain.

Applicable OSHA Regulations

OSHA's grain-handling standard includes provisions that took effect March 30, 1988 that pertain to entry into bins, silos and tanks.

The OSHA standard includes requirements for employers to:

- ▶ issue written permits before entry occurs, unless the employer or its representative is present during the entire operation;
- ▶ disconnect, lock-out and tag all mechanical, electrical, hydraulic and pneumatic equipment feeding or emptying the structure that presents a danger to persons while inside bins, silos or tanks;
- ▶ test the atmosphere within a bin, silo or tank for the presence of combustible gases, vapors and toxic agents if the employer has reason to believe such hazards may be present. Testing for

the presence of oxygen also is required unless there is continuous natural air movement or forced air ventilation before and during the time that persons are inside the structure. Respirators are to be provided if ventilation cannot eliminate toxicity or oxygen deficiencies;

- ▶ equip persons entering bins, silos or tanks from the top with body harnesses with lifelines, or a boatswain's chair meeting OSHA requirements; and
- ▶ station an observer "equipped to provide assistance" and trained in rescue procedures outside the structure during entry operations. Employers also are required to provide equipment for rescue operations.

Training Materials Available from NGFA

To provide education and training on this important safety matter, Purdue University under a contract with the National Grain and Feed Foundation in May 1998 produced the "*Don't Go With the Flow*" engulfment-prevention training program.

The program reviews the hazards associated with flowing grain and the most common types of grain entrapments at commercial facilities. In addition the program provides information on effective procedures for rescuing partially and fully entrapped workers from various locations, including from the base of a silo, top of a silo and flat storage structures.

The training package is available at a cost of \$90 for members and \$180 for non-members, with reduced pricing for larger-quantity orders. It includes a 28-minute video on DVD; a PowerPoint and PDF presentation for employee training; written lesson plan; pre- and post-video test to administer to employees; warning poster; and engulfment fact sheet. To order, use the order form on the reverse side.

Questions? Contact NGFA Director of Regulatory Affairs Jess McCluer at jmcccluer@ngfa.org, or at 202-289-0873, extension 23.

ORDER FORM

"Don't Go with the Flow" Safe Bin Entry Training

Name: _____

Title: _____

Company: _____

Street Address: _____

City: _____

State: _____ Zip: _____

Phone Number: () _____ Fax Number: () _____

Email Address: _____

Order Information

NGFA Member Rate: **\$90** each for one set
 \$65 each for two to five sets
 Contact NGFA for quantity discounts (six or more sets)

Nonmember Rate: **\$180** each for one set
 \$150 each for two to five sets
 Contact NGFA for quantity discounts (six or more sets)

Quantity Desired: _____

Total Amount: \$ _____

(prices include shipping and handling)

Mail order form to:

National Grain and Feed Foundation
1250 Eye St., N.W., Suite 1003
Washington, D.C., 20005-3922

Fax order form to:

(202) 289-5388

Any Questions? Call us at (202) 289-0873 or e-mail us at jmcluer@ngfa.org.