

Grain Entrapment Prevention - Priorities Summarized

By Wayne Bauer

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I. Prevention & Awareness

We need to raise the Awareness Levels and stress Annual “Hands-On” Training.

- A. Provide – Grain Entrapment Prevention flyers with every bin sold and erected. Content and stats in this flyer can be updated every April with assistance from Grain Journal..
- B. Operator Manuals should include more information on preserving grain quality and Operating Procedures / Best Management Practices to follow if you must enter the bin, along with recognition of potential hazards, such as grain entrapment, entanglement, and/or electrocution.
- C. An Annual –“Hands-ON” – Bin Entry training class should be offered to anyone entering bins with sufficient amount of grain to engulf them.
 1. Unfortunately, many facilities are not providing this annual training.
 2. Industry needs more trained instructors.
 3. Industry needs a standard message and syllabus for training.

II. Design Parameters

The industry needs to adopt new – Design Parameters for future grain handling facilities, which are safer and more efficient. The following are a few of the Design Parameters or specifications that should be considered:

- A. Consider improved air flow within the aeration system, especially air flows under the roofs, and temperatures must be monitored more closely. We must also do a better job of trouble-shooting and maintaining existing systems.
- B. Reclaim systems need to operate in such a way that they will not plug as frequently. Entanglement hazards need to be mitigated, if someone is in the bin, while the system is operating. Zero-entry should be our goal with any new facilities. .
- C. Should an entrant need to wear a harness and use a life-line, they must be able to secure the restraint system or bin-entry lifeline properly to an anchor point that will sustain the potential loads it would be subjected to. Harness and lifelines are useless or of very little value without a solid anchor point. The anchor point is the foundation, which the entire bin-entry system is built upon.

29 CFR 1910.**272 (g)(2)** – “The lifeline shall be so positioned, and of sufficient length, to prevent the employee from sinking further than waist-deep in the grain.

Design Parameters (continued)

- D. Is it practical to increase the size of access doors / entry points?
- E. If practical, work-platforms would be more user friendly and much easier to initiate a rescue from, if they approached 48” x 48” in size.
- F. To what extent can we retrofit existing bins in the field that are 5 – 40 years old?

III. Emergency Preparedness

The industry must give more thought to emergency response capabilities by addressing some of the following:

- A. The operator / employer should identify a competent emergency response group that could potentially respond in a time-effective manner.
- B. They should conduct an annual training activity with this response group and simulate the type of confined spaces in use on their site.
- C. Rescue equipment must be available for these potential entrapment incidents.
- D. Some thought should be given to how a “packaged patient” would be lowered to the ground safely and in a timely manner.

Design Parameter priorities for discussion on March 12 & 13, 2013:

1. What should internal anchor points look like?
2. Can the size and/or type of access points be improved upon?
3. Is it practical to improve the size and type of work-platforms?

Saved as: Grain Entrapment Prevention Priorities

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Focus Points & Objectives for the Grain Entrapment Prevention (GEP) – Initiative and the Grain Handling Safety Coalition (GHSC).

The following was shared by Wayne Bauer and will be reviewed in a joint meeting with GEP and GHSC the evening of March 13, 2013 at the Grain Entrapment Prevention Symposium in Lincoln, NE.

Focus Points / Objectives of Grain Entrapment Prevention Initiative:

- 1) Produce & distribute new – Grain Entrapment Prevention (GEP) 2 & 6 page flyers every April to raise awareness in this area. Grain Journal will handle art work and production.
- 2) Promote continual use of website (www.grainentrapmentprevention.com)
- 3) Contribute an article every two months in Grain Journal magazine on some aspect of preventing grain entrapments.
- 4) Establish new design parameters / specifications through ASABE on anchor points, bin-entry systems, access doors, and work platforms. The next draft will deal only with Design Parameters in a Guidance Document. Any reference to operating procedures, Best Management Practices, rescue issues and/or emergency preparedness will be dealt with in other documents.
- 5) Develop training materials and programs and speakers for:
 - Preservation of grain quality in bins
 - Prevention and Bin-Entry procedures
 - How do you retrofit older / existing steel bins, which are in the field?
 - Adoption of new – Design Parameters for future grain handling facilities
 - Create joint- Regional Emergency Response Teams for ag related incidents
- 6) Provide a variety of (4 / 8 / 16 / 24 & 40 hour) **standardized** training formats to address the needs of the group requesting training. Distinctions will be made to Awareness , Operations and Tech Levels.
- 7) Promote additional training for:
 - Annual (4 – 8 hour) classes at all commercial grain handling facilities.
 - Tech Rescue training for those groups, who desire Tech level training in High-Angle / Confined Space Rescue. Most of these classes will be 32 or 40 hour classes.

Issues of interest to both the GEP-Initiative and GHSC:

- 1) Attempt to reduce the number of “Reported Grain Entrapments” and Fatalities
- 2) Standardize use of terms & definitions & Best Management Practices
- 3) Develop and promote standards for safe entry.

Focus Points & Objectives of the GEP & GHSC . . .(continued)

- 4) Develop more effective rescue capabilities with emergency response groups
 - 5) Attempt to coordinate efforts on a national basis.
 - 6) Hold a joint meeting in March every year. Suggest that GHSC coordinate the next gathering in Bloomington, ILL in March of 2014.
 - 7) Compile and share a common – “Industry Calendar”.
 - 8) Maintain booths at the (3-5) largest – U.S. Farm Shows every year to distribute literature & conduct demos to raise the awareness level with farm families.
 - 9) Produce & distribute – SATRA’s – video on Grain Entrapment Prevention & Rescue to local fire departments.
 - 10) Promote idea and use of a national – “Ag Emergencies Hot Line” for rural responders.
 - 11) Offer “Certification” to participants that successfully complete standardized training opportunities.
 - 12) Provide more input and guidance to OSHA and other gov’t. agencies. We need to formulate regulations that are meaningful, practical and cost effective. We need to focus on the real causes of fatalities in each SIC/ NAICS code area in the ag sector. We must help everyone appreciate the REAL Threats versus the perceived threats, if we are going to make actual progress in reducing injuries and fatalities.
 - 13) Seek funding / grants from OSHA to help achieve objectives above.
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In any case , we need input, training and feedback on the following topics in the future:

- 1). **Prevention** of grain entrapments
- 2) **Bin Entry procedures** / Best Mgt. Practices
- 3) **Retrofitting older** / existing steel bins
- 4) Establishing **new – Design Parameters** in a simple Guidance Document
- 5) Address the challenge posed in **1910.272(g)(2)** – Use of **harness & lifelines**. . ***“The lifeline shall be so positioned, and of sufficient length, to prevent the employee from sinking further than waist deep in the grain.”***
- 6) Employer must demonstrate that they have addressed: 1910.**272(g)(4)** – Employer shall **provide equipment for rescue operations**. . .and 1910.**272(g)(5)** – Train observer for Rescues - - Employee acting as **observer shall be trained in rescue procedures**, including notification methods for obtaining additional assistance.

Saved as: Focus Points for GEP & GHSC

_____ GEP Symposium flashdrive

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