Top Regulatory Issues Facing the Grain, Feed and Processing Industry in 2014

Jess McCluer
National Grain and Feed Association
January 15, 2014
Monterrey, CA
U.S. Grain Entrapments

Year

2007 2008 2009 2010 2011 2012

Annual Incidents

Non-fatal Fatal

Source: Purdue University Agricultural Safety and Health Program
Regional and Local Emphasis Programs

• Local Emphasis Programs
  o Region V (IL, IN, WI, MI, OH)  2/01/2013
  o Region VI (AR, LA, NM, OK, TX)  10/01/2012
  o Region VII (IA, KS, MO, NE)  10/01/2012
  o Region VIII (CO, MT, ND, SD, UT, WY)  10/05/2012
  o Region X (AK, ID, OR, WA)  2/20/13

• Combustible Dust NEP has been reissued
Six Figure OSHA Initial Fines
Grain Facilities 2011 / 2012

- $144,400 CPI-Lansing, LLC; Red Cloud NE, December 2012
- $157,500 Ware Milling Co., Inc.; Waycross GA, May 2012
- $406,000 Bartlett Grain Company; Atchison KS, April 2012
- $191,700 Alabama Farmers Co-op; Decatur AL, April 2012
- $812,000 SD Wheat Growers; McLaughlin SD, March 2012
- $758,450 All Feed Processing; Galva IL, November 2011
- $132,000 C.O. Grain Inc.; Atkinson NE, November 2011
Six Figure OSHA Initial Fines
Grain Facilities 2011 (Continued)

- $258,000 Corpus Christi Grain Co.; TX, October 2011
- $229,000 Cenex Harvest States; Columbus MT, August 2011
- $167,000 All Feeds Processing; Galva IL, June 2011
- $122,500 Lakeland Feed; Hamilton MN, May 2011
- $378,000 North Central Coop; Ipswich SD, March, 2011
- $465,500 Gavilon Grain LLC; Morral OH, March 2011
OSHA’s in the Press

• Using the press for deterrence effect
  o Many more press releases
  o Greater access to information – hyperlink to citations, FOIA
  o Publicizing OSHA’s Top 10 standards violated

• Publicizing bad actors through the Severe Violator Enforcement Program
Recent Press on Grain Industry

NPR
- Special Series Page: Buried in Grain
- (part 1) Fines Slashed In Grain Bin Entrapment Deaths (with audio from All Things Considered)
- (part 2) Enforcement of Penalties Weak in Grain Deaths (with audio from Morning Edition)
- (part 3) Simple Strategies Can Prevent Grain Bin Tragedies (with audio from All Things Considered)
- (part 4) Why Grain Storage Bin Rescues Are Risky and Complex (with audio from Morning Edition)
- Buried in Grain – database of incident reports, fines, and how much the fines got cut
- Should Grain Bins On Farms Be Regulated, Too?

Center for Public Integrity
- Worker suffocations persist as grain storage soars, employers flout safety rules
- Rethinking OSHA exemption for farms
Recent Press on Grain Industry (cont.)

Kansas City Star
• Map of grain bin entrapment deaths in Kansas & Missouri
• Charges considered in Atchison grain elevator blast
• Video: Family discusses son lost in Atchison blast, demand action
• Young lives lost in dangerous jobs
• Memories of victims evoke workplace danger reminders

PBS
• Death of 14-year-old worker due to dangerous conditions in grain storage bins (from “Newshour”)

Harvest Public Media
• (supplies content to farm country public radio stations)
• When grain elevators explode

New York Times
• Death in the Silo (video)
OSHA and Social Media

(Work in Progress)
This Official Blog of the U.S. Department of Labor

You Can Die in a Grain Bin in Less Than 60 Seconds
By Tom Henders on September 16, 2013 - 2 Comments

It can happen to you.

Five seconds. That is how quickly a worker can become engulfed in flowing grain and be unable to get out.

Sixty seconds. That is how quickly a worker can be completely submerged in flowing grain. More than half of all grain engulfments result in death by suffocation.

With the agricultural season still in full swing, the U.S. Department of Agriculture is predicting a record-breaking corn crop in 2013. In the heartland, that is great news for the farming industry—but it also underlines the unique hazards facing workers in the grain handling industry, especially in the storage of grain.

National Grain and Feed Association
Sequestration and Government Shutdown

• Sequestration, reduction in funds, did not impact OSHA inspectors in FY 13.

• OSHA furloughed 90 percent of inspectors during shutdown. Only two inspectors at each of OSHA’s Area Offices. Primary duty was to respond to fatality or emergency.
OSHA Recordkeeping

• On November 8, 2013, (OSHA) published its proposed rule to amend its recordkeeping regulations.

• The new regulation will not change what injuries and illnesses have to be recorded or how they are recorded, but will create new requirements for employers to submit these records directly to OSHA electronically.

• Employers with 250 or more employees, who are required to keep records, will have to submit records to OSHA on a quarterly basis. Employers with 20 or more employees, and who are in certain designated industries, will have to submit their summary records annually. Certain other employers, who OSHA contacts, will be required to submit more detailed information about specific injuries and illnesses.

• OSHA will post in a searchable online database company and location specific data on injuries and illnesses, other than employee identification information.
Recent OSHA Enforcement Actions

• Enforcement Focus on Temp Workers
  o Memo outlines new checks inspectors should make during worksite inspections, including determining whether any temporary workers are employed, whether the workers are exposed to conditions in violation of OSHA rules, and whether the workers received safety and health training “in a language and vocabulary they understand.”

• Unions May Represent Nonunion Workplaces During Inspections
  o Released an interpretation letter April 5, 2013, clarifying that nonunion employees can select anyone, including nonemployee union representatives, to accompany OSHA officials during safety inspections of their employer’s worksite.

• OSHA Jurisdiction on Farms
  o In 2011 OSHA determined that the agency has jurisdiction over family farms, if they are involved in post-harvest grain handling operations such as crop cleaning, sun drying, shelling, fumigating, curing, sorting, grading, packing, and cooling.
<table>
<thead>
<tr>
<th>OSHA Inspection Statistics (Federal and State)</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Inspection</strong></td>
<td>296</td>
<td>380</td>
<td>438</td>
<td>356</td>
</tr>
<tr>
<td><strong>Percent Programmed Inspections</strong></td>
<td>46%</td>
<td>60%</td>
<td>63%</td>
<td>61%</td>
</tr>
<tr>
<td><strong>Total Violations Issued</strong></td>
<td>1,289</td>
<td>1,552</td>
<td>1,160</td>
<td>958</td>
</tr>
</tbody>
</table>
Most Frequently Cited OSHA Standards in Grain Handling Industry

Most frequently cited standards in 1910.272 include:

- 1910.272 J01 – failure to implement a written housekeeping program for fugitive dust.
- 1910.272 J02II – failure to immediately remove fugitive dust accumulations, or provide equivalent protection.
- 1910.272 G01 III – failure to test the atmosphere within a bin before employees enter.
- 1910.272 G01 II – failure to deenergize and disconnect all equipment in a grain storage.
- 1910.272 M03 – failure to maintain a certification record of performed preventative maintenance inspections.
- 1910.272 G01 I – failure to issue a permit prior to entering the bin.
- 1910.272 G04 – failure to provide rescue equipment suitable for the bin being entered.
- 1910.272 D – failure to implement an emergency action plan.
- 1910.272 E02 – failure to train employees for special tasks, such as bin entry.
- 1910.272 G02 – failure to provide lifelines and harnesses for employees entering the bin at or above the level of the grain.
Citation 2 Item 1  Type of Violation:  Willful

29 CFR 1910.272(j)(1): The employer did not develop and implement a written housekeeping program that established the frequency and the method(s) determined best to reduce accumulations of fugitive grain dust on ledges, floors, equipment, and other exposed surfaces in the grain handling facility.

   (a)  On or about 10/06/11 - Feed Mill, no housekeeping program was established to reduce the accumulation of combustible dust, allowing accumulation of dust on ledges, floors, platforms, electrical equipment, and other exposed surfaces.

Abatement Documentation Required

Date By Which Violation Must be Abated: 04/13/2012
Proposed Penalty: $ 63000.00
Citation 2 Item 1 Type of Violation: Willful

29 CFR 1910.272(j)(1): The employer did not develop and implement a written housekeeping program that established the frequency and the method(s) determined best to reduce accumulations of fugitive grain dust on ledges, floors, equipment, and other exposed surfaces in the grain handling facility

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Abatement Documentation Required

Date By Which Violation Must be Abated: 04/13/2012
Proposed Penalty: $63000.00
Citation and Notification of Penalty

Company Name: 
Inspection Site: 

Citation 2 Item 3  Type of Violation:  Willful 

29 CFR 1910.272(j)(3): The use of compressed air to blow dust from ledges, walls, and other areas was permitted when machinery that presented an ignition source in the areas was not shut-down:

On or about October 15, 2011, employees working in and near the grain elevator were exposed to fire and explosion hazards in that compressed air was used for cleaning without first shutting down machinery that presented potential ignition sources.

29 CFR 1903.19(d)(1) requires certification and documentation that the abatement of the above violation is completed.

Date By Which Violation Must be Abated:  05/07/2012
Proposed Penalty:  $ 70000.00
Citation 2 Item 2 Type of Violation: Willful

29 CFR 1910.272(g)(3): In the grain handling facility an observer, equipped to provide assistance, was not stationed outside the bin, silo, or tank being entered by an employee:

a) On or about and times prior to November 8, 2011, at the [redacted] facility, the employer did not ensure that employees who entered grain storage bins were protected from bin entry hazards because an observer, equipped to provide assistance in an emergency, was not always stationed outside the bin entered by employees.

ABATEMENT CERTIFICATION AND DOCUMENTATION ARE REQUIRED.

Date By Which Violation Must be Abated: 05/28/2012
Proposed Penalty: $ 38500.00

[Signature]
Robert E. Vazzi
Area Director
Citation and Notification of Penalty

Company Name:  
Inspection Site:  

Citation 2 Item 1  Type of Violation:  Willful

29 CFR 1910.272(g)(1)(ii): Prior to entry, all mechanical, electrical, hydraulic, and pneumatic equipment which presented a danger to employees inside bins, silos, or tanks in the grain handling facility were not disconnected, locked out and tagged, blocked off, or prevented from operating by other means or methods:

a) On or about November 8, 2011, at the facility, the employer did not ensure employees were protected from bin entry hazards. The screw auger was not locked out or otherwise prevented from operating, which exposed the employee inside grain storage bins to amputation hazards.

ABATEMENT CERTIFICATION AND DOCUMENTATION ARE REQUIRED.

Date By Which Violation Must be Abated:  05/28/2012
Proposed Penalty:  $ 38500.00
OSHA Needs to Monitor Effectiveness of Enforcement

• In January 2013, the General Accounting Office (GAO) issued a report regarding the effectiveness of OSHA’s enforcement programs.

• The report concluded that OSHA “knows little” about which of its enforcement related activities is ensuring compliance.
  o Which compliance assistance efforts are effective

• Enhancing monitoring of enforcement activities and determining which works best is key for Agency to achieve mission.
• Thomas Perez is the new Secretary of Labor. Prior to this office, he was director of Civil Rights Division of Dept. of Justice. Many Republicans opposed his nomination.

• Assistant Secretary Dr. David Michaels and senior OSHA staff will stay during second term.
Rulemaking
• Injury and Illness Prevention Program
• Silica
• Combustible Dust
• MSD Column on OSHA 300 Log
• Walking/Working Surfaces e.g. rolling stock fall protection
• HazCom

Enforcement
• Reallocation of budget
• Appointments to OSH Review Commission
• Emphasis Programs
• Press Releases
• Severe Violator Enforcement Program
• State Oversight
• Whistleblower actions
OSHA Budget for FY14

- Wants additional $2 million for contract support to assist with rulemaking.
- OSHA projects that it will issue four Final Rules, seven Notices of Proposed Rulemaking (including Combustible Dust and Injury and Illness Prevention Programs) and initiate SBREFA reviews for five rules (Combustible Dust).
- OSHA is requesting a significant decrease in funding for its Federal Compliance Assistance programs. Want $5.9 million to bolster OSHA's enforcement of several whistleblower laws that the Agency monitors, including the Affordable Care Act.
Top Grain Handling Issues for 2014

- Combustible Dust Rulemaking
  - Globally Harmonized System for Labeling
  - Industry Consensus Standards e.g. NFPA

- Rolling Stock Fall Protection

- Continued Increased Enforcement Upon Grain Handling Industry
  - Boot Pit/Permit Required Confined Space

- Globally Harmonized Standard for Labeling

- Sweep Auger Letter of Interpretation
The three parties, other than stakeholders, that are primarily involved in the combustible dust rulemaking process, include:

- Occupational Safety and Health Administration (OSHA)
- Chemical Safety Board (CSB)
- National Fire Protection Association (NFPA) - (Has 5 existing standards-Agriculture NFPA 61, Metals NFPA 484, Chemical NFPA 654, Sulfur NFPA 655, Wood NFPA 664).
Chemical Safety Board Actions

- Investigated combustible dust explosion in the chemical industry 2000-2006 and compiled a list of combustible dust explosions by industry type.
- Held a hearing in 2006 in Washington recommending that OSHA:
  - Develop a combustible dust regulation to give guidance to industry as soon as they can.
  - Model or use NFPA 654 standard for rules.
  - Improve MSDS requirements that better describe explosive properties of dusts.
Combustible Dust Regulations and Compliance

• H.R. 5522 “Combustible Dust Explosion and Fire Prevention Act of 2008”

  - U.S. House of Representatives approved H.R. 5522 by a vote of 247-165, that would require OSHA to develop a standard for combustible dusts within 90 days of enactment, and a final standard within 18 months. Includes language stating “relevant” NFPA standards are to be covered under the CD standard.

• Combustible Dust Advance Notice of Proposed Rulemaking (ANPRM)

  - Issued on Oct. 21, 2009 outlined agency’s intent to develop a comprehensive combustible dust standard that would apply across different industry sectors
  - ANPRM posed various 69 questions on which OSHA is soliciting public comment.
  - Stakeholder meeting conducted on Dec. 14, Feb. 17 and April 21; NGFA testified at each one.
  - NGFA participated in June 28 Web-based forum.
  - OSHA originally had the CD standard on a fast track to be done in 2 to 3 years (from 2009). According to the current agenda, OSHA will convene a Small Business Advocacy Review panel in early 2014.
OSHA’s Acknowledges Complexity of Combustible Dust Rule

- Wide variety of materials, processes and equipment
- Difficulty in truly defining combustible dust
- Retrofitting facilities
- Additional performance based consensus standards e.g. NFPA
OSHA is looking at other ways to address combustible dust hazards, such as, using other standards to cover the hazard.

- Housekeeping Section of Proposed Walking and Working Surface proposed rule
- “Chemical Hazard” Category in Proposed Amendment to Globally Harmonized Communication standard
- Injury and Illness Prevention Program
- NFPA’s New Standard Covering the Fundamentals of Combustible Dust
Overview of NFPA 652 Content

• Committee was created in March 2011 after NFPA tried to consolidate all of the dust standards
  • Technical Correlating Committee comprised of representatives from each of the dust committees also created and is designed to “recommend” modifications to the dust standards based on 652 requirements.

• First draft posted in early September 6, 2013.
  • Comments due on November 15, 2013.

• Second draft will be posted in July 2014.

• Final standard is scheduled to be issued in 2015.
Rolling Stock Fall Protection

• FGIS cited by OSHA in July 2011 for not using fall protection on top of rail car; being appealed at national level
  • Further example of “broad” interpretation of letter of interpretation
  • OSHA recently cited an FGIS designated official agency
  • Recent settlement does not provide clarification

• Since 2010 several grain-handling facilities have been issued individual “willful” citations with fines between $60-70,000
• In the OSHA-FGIS settlement, citation regarding work on top of rolling rail cars was dropped. However, OSHA did not rescind three other citations related to personal protective equipment (PPE) training.

• According to OSHA, FGIS employees allegedly did not conduct proper “hazard assessments” before working on top of the rail cars and did not receive adequate training in how to use PPE while on the car.
• FGIS reviewed its current rolling rail car fall protection training programs for its employees.

• Following the review, FGIS met with OSHA to discuss the use of PPE, after proper hazard assessment, in a range of “scenarios,” involving different types of facilities and equipment.

• FGIS is now in the process of revising its employee training material to address the different types of facilities, equipment and types of operations to determine if the use of fall protection is feasible.
Rolling Stock Fall Protection (cont.)

• On March 2, the Occupational Safety and Health Review Commission issued a decision that reaffirmed the “Miles Memo,” particularly its determination of where fall protection is feasible (inside or contiguous to a building) and where it is not (away from such areas). Also reaffirmed administrative controls can be used to protect employees.

• Notice of Proposed Rulemaking (NPRM) issued on May 24, 2010 outlined agency’s intent to significantly revise current fall protection standard.
  • Specific issues related to grain and feed industry:
    • Seeks comments on whether specific regulations are needed to address rolling stock and commercial motor vehicles
    • Seeks comments on whether to include specific references to combustible dust in the housekeeping section of the standard
Recently OSHA has issued numerous citations where “boot pits” are considered confined spaces.

OSHA does not have a specific definition for “boot pit;” similar to “guarded/unguarded auger” issue

Based on citations and discussions, if it has a hatch or manhole cover, it is a PRSC.

Appear to be becoming the “new” area of OSHA enforcement focus, particularly in some regions where grain handling facilities are part of the local emphasis enforcement program
The NGFA has completed a guidance document designed to assist grain handlers in evaluating if a “boot pit” is a Permit Required Confined Space (PRCS) based on OSHA’s Permit-Required Confined Space standard and OSHA’s Confined Spaces Advisor.

Presented document to OSHA and is available on NGFA Web page

Also developed an advisory focusing on recent reports of high-moisture levels in some new-crop corn deliveries that way warrant atmospheric testing to protect employees.
OSHA’s Treatment of Boot Pits

- Some OSHA Area Offices treat boot pits as "automatic” permit-required confined spaces
  - Theory seemed to be: “Potential” for atmospheric hazard (H2S, oxygen deficiency, CO) always exists
  - No good deed goes unpunished: If employer voluntarily tests boot pit atmosphere, the boot pit must be a PRCS
NGFA’s Response

• Play offense
  • Sweep auger situation took on a life of its own
  • Smithpeter letters were a surprise
  • OSHA keep issuing additional guidance claiming that use of sweep augers while employees were in bin violated Section 1910.272(g) or (h)
NGFA’s Response

• Sweep auger issue now resolved, and OSHA will issue new guidance confirming that employees *can* be in the bin

• For boot pits
  • Do not wait for OSHA guidance
  • Develop NGFA guidance on how to assess boot pits
  • Let OSHA tell us why our method of evaluating is insufficient
• Guidance document for grain handling employers on how to determine whether boot pits are PRCSs
  • Issued September 2013
  • Modeled on OSHA’s eLaws Confined Space Advisor, OSHA guidance and the rulemaking record
OSHA’s PRCS Standard

• For the standard to apply, the space must:
  • Meet the definition of a “confined space”; AND
  • Have a characteristic that makes it a “permit space”

• Types of boot pits – many!
  • Below grade or above
  • May or may not be in priority housekeeping area
  • Different types of ventilation/equipment
OSHA’s PRCS Standard

• What is a “confined space”?  
  • Is not designed for continuous human occupancy  
  • Has limited or restricted means for entry/exit AND  
  • Is large enough so employee can enter and perform work  
• Must meet all three criteria
Is a Boot Pit a Confined Space?

- Is large enough and so configured that an employee can work in it? **YES**
  - Employees enter to perform maintenance
  - For some boot pits, employees *must* enter because they are priority housekeeping areas (floor areas inside 35 feet of inside bucket elevators – fugitive dust over 1/8 of an inch must be removed immediately)
Is a Boot Pit a Confined Space?

- Has limited or restricted means for entry or exit?
  MAYBE
  - Standard-sized door?
  - Ladder, articulated steps, or something different than regular stairs?
  - Crawl through or around equipment?
  - Tunnels? (OSHA guidance on this unclear)
- Main issue: Anything that would prevent the employee from escaping easily?
Is a Boot Pit a Confined Space?

• Not designed for continuous human occupancy? **THIS FACTOR OFTEN NOT MET**
  • “Intended as a regular place of work and supplied with ventilation and other conditions necessary to support life”
  • Critical factor is if employee can work in the space, not the primary use of the space
  • OSHA Example: Primary purpose of telecommunications vault doesn’t matter; issue is whether employees can work in the space
Is a Boot Pit a Confined Space?

• Key distinction between typical boot pit and other types of spaces: No operational adjustments need to be made when entering a boot pit
  • Entering a grain bin: isolate or empty the bin
  • Entering a boot pit: enter under normal operating conditions and start working

• Boot pits generally are designed for continuous human occupancy
Is a Boot Pit a PRCS?

• Assuming a boot pit is a confined space, is it a PRCS?
• Must have *one* of the following:
  • Contains or potential to contain hazardous atmosphere
  • Potential for engulfment
  • Internal configuration that could trap employee
  • “Any other recognized safety or health hazard”
How are Grain Bins Different?

- Section 1910.272(g) (bins) and (h) (flat storage structures) apply to entries.
- 1910.272(g): test atmosphere if “reason to believe” there may be hazards.
  - Wet grain
  - Fumigants
  - Some kind of upset condition
Why Voluntarily Perform Air Monitoring?

- At the request of an OSHA Area Office
- In unique situations where there could be a hazard
- As a practice exercise for employees
- *Voluntary monitoring does not “convert” a boot pit into a PRCS – the definition is either met or it is not*
Status of the Guidance

- NGFA met with OSHA on September 12, 2013
- OSHA asked a number of questions about boot pits, including atmospheric conditions
- Did not point out any flaws in the evaluation process set forth in the document
- Fairly non-committal – OSHA will continue to evaluate status on a case-by-case basis
Globally Harmonized Standard for Labeling Amendment to OSHA Hazard Communication Standard

- On May 26, 2012 updates to the hazard communication standard became final.
- The majority of the changes involved adopting the Globally Harmonized Standard for Classification of Chemicals or GHS.
- The biggest changes to HazCom 2012 are in the area of combustible dust, data sheets and labeling.
Hazard Communication 2012
Key Implementation Dates

• December 1, 2013
  • Employers must train employees on the new formatted SDS and label requirements.

• June 1, 2015
  • Manufacturers must have converted all SDS and labels to the GHS format and begin sending to distributors and suppliers.
Hazard Communication 2012
Key Implementation Dates

• December 1, 2015
  • Distributors must be sending only new SDS and labels to their customers (employer).

• June 1, 2016
  • Employers must be in full compliance meaning that they have the new SDS’s to replace the old MSDS and products received have the newly formatted labels.
Examples of Chemicals in Grain Industry

• Anti-freeze and Coolant
• Sealant
• Plastic Cement
• Hydraulic Fluid
• Diesel Fuel
• Fumigants
  • Anhydrous Ammonia
  • Phosphine
OSHA Hazard Communication Standard

Material Safety Data Sheet
May be used to comply with
OSHA Hazard Communication Standard,

Section I
Identify the manufacturer.
Address (Number, Street, City, State and Zip Code)

Section II — Hazardous Ingredients/Identity Information

Section III — Physical/Chemical Characteristics

Section IV — Fire and Explosion Hazard Data

Current MSDS for Grain Dust

National Grain and Feed Association
Manufacturers, distributors and suppliers are responsible for:

- Ensuring that their customers are provided a copy of these MSDS’s/SDS’s.
Hazard Communication: What Hasn’t Changed

Employers are required to:

• Develop a written program describing how the standard elements are implemented.
• Maintain a list of all hazardous chemicals.
• Obtain and make MSDS’s/SDS’s available to employees.
Hazard Communication: What Hasn’t Changed

• Provide employees with training about the Hazard Communication Standard including:
  • How to recognize, understand and use labels and MSDSs/SDSs.
  • Using safe procedures when working with hazardous substances.
• Address non-routine tasks.
Employees are required to:

• Read labels and MSDS’s/SDS’s.
• Follow label and MSDS/SDS instructions and warnings.
• You should know all about the chemicals you use BEFORE you attempt to use them.
2103 Required Training

• Since HazCom 2012 is requiring a new label and SDS, OSHA has specified that employers must provide training on the new approach
• The intent of this training is to help ensure that workers can access and use the information on the new labels and SDSs effectively
• New labels and SDSs are already being produced and are coming into American workplaces
Label Requirements

- Labels on shipped containers must include:
  - Product Identifier
  - Signal Word
  - Pictogram
  - Hazard Statement(s)
  - Precautionary Statement(s) - for each hazard class and category
  - Supplier Identification (Name, Address, Phone Number)
Training on Label Elements

• Labels on shipped containers of hazardous chemicals will be changing by June 1, 2015
• The primary change is that information on labels has been standardized
  • There are certain types of information required to appear on labels
  • All suppliers have the same requirements, so labels should be more consistent in approach than current labels
“Signal word” means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label.

The signal words used in this section are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe.
“Pictogram” means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical.

Eight pictograms are designated under this standard for application to a hazard category.
# HCS Pictograms and Hazards

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Flame</th>
<th>Exclamation Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Carcinogen</td>
<td>• Flammables</td>
<td>• Irritant (skin and eye)</td>
</tr>
<tr>
<td>• Mutagenicity</td>
<td>• Pyrophorics</td>
<td>• Skin Sensitizer</td>
</tr>
<tr>
<td>• Reproductive Toxicity</td>
<td>• Self-Heating</td>
<td>• Acute Toxicity (harmful)</td>
</tr>
<tr>
<td>• Respiratory Sensitizer</td>
<td>• Emits Flammable Gas</td>
<td>• Narcotic Effects</td>
</tr>
<tr>
<td>• Target Organ Toxicity</td>
<td>• Self-Reactives</td>
<td>• Respiratory Tract</td>
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<tr>
<td>• Aspiration Toxicity</td>
<td>• Organic Peroxides</td>
<td>• Irritant</td>
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<tr>
<td></td>
<td></td>
<td>• Hazardous to Ozone</td>
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<tr>
<td></td>
<td></td>
<td>Layer (Non-Mandatory)</td>
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<table>
<thead>
<tr>
<th>Gas Cylinder</th>
<th>Corrosion</th>
<th>Exploding Bomb</th>
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<tbody>
<tr>
<td>• Gases Under Pressure</td>
<td>• Skin Corrosion/ Burns</td>
<td>• Explosives</td>
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<tr>
<td></td>
<td>• Eye Damage</td>
<td>• Self-Reactives</td>
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<tr>
<td></td>
<td>• Corrosive to Metals</td>
<td>• Organic Peroxides</td>
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<table>
<thead>
<tr>
<th>Flame Over Circle</th>
<th>Environment</th>
<th>Skull and Crossbones</th>
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</thead>
<tbody>
<tr>
<td>• Oxidizers</td>
<td>• Aquatic Toxicity</td>
<td>• Acute Toxicity (fatal or toxic)</td>
</tr>
</tbody>
</table>

*National Grain and Feed Association*
“Hazard statement” means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

- Example: Fatal if swallowed (Acute Oral Toxicity)
Precautionary Statement

• “Precautionary statement” means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling
  • Example: Do not eat, drink, or smoke when using this product
  • Example: Keep container tightly closed
PAINT (METHYL FLAMMALINE, LEAD CHROMOMIUM)

DANGER
Causes damage to the liver and kidneys through prolonged or repeated exposure to the skin.
Keep away from food and drink.
Wash hands thoroughly after use and before eating.
Highly flammable liquid and vapour.
Keep away from heat and ignition sources.

FIRST AID
Call emergency medical care.
Wash affected area of body thoroughly with soap and fresh water.

Great Lake Paints Inc., Columbus, Ohio, USA.
Telephone 999 999 9999

Pictograms
- Conveys specific information about the hazard(s) of a chemical

Product Identifier
- Chemical name or number to identify the chemical

Signal Word
- Alerts level of severity of hazard

Hazard Statement
- Describes the nature of hazard(s) associated with a chemical

Precautionary Statement
- Recommended measures to take to prevent adverse effects

First Aid Statement
- Emergency care information

Supplier Information
- Name, address and telephone number of the chemical manufacturer, importer or other responsible party
Label Example

Xyz... Chemical

WARNING
Flammable Liquid and vapor
Harmful if swallowed
May cause damage to organs (liver)
May cause damage to organs through prolonged or repeated exposure (heart)
Suspected of damaging fertility

Keep away from heat, sparks, open flames and hot surfaces. No smoking. Do not breathe vapors. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use protective equipment as required. Wear protective gloves and eye protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof electrical, ventilating, lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Store locked up in a cool, ventilated place. Keep cool. Dispose of contents and container in accordance with local, state and federal regulations.

First Aid:
If swallowed: Call a doctor if you feel unwell. Rinse mouth.
If on skin or hair: Remove immediately all contaminated clothing. Rinse skin with water.
If exposed or if you feel unwell: call a doctor.

Fire:
In case of fire: Use water spray foam, dry chemical or carbon dioxide (CO₂) for extinguish.

GHS Company, 123 Global Drive, Cincinnati, OH

telephone (800) 555-8888
Safety Data Sheet Format

• New safety data sheets will be organized using a specified order of information
• The required information will appear in the same sections of an SDS regardless of the supplier
• The most important information will be listed in the first sections of the SDS
1. Identification
2. Hazard(s) identification
3. Composition/information on ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure control/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information
**Example of New Format SDS**

**NFPA 704 Placard & Ratings Voluntarily Provided**

**GHS System and Labels Down in Section 2**

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

- **Product name**: Product XYZ
- **Synonyms**: 
- **SDS Number**: 8881000088809
- **Version**: 1.1
- **Product Use Description**: fuel
- **Company**: 

**SECTION 2. HAZARDS IDENTIFICATION**

- **Classifications**: Flammable Liquid – Category 1 or 2 depending on formulation, Aspiration Hazard – Category 1, Carcinogenicity – Category 2, Specific Target Organ Toxicity (Repeated Exposure) – Category 2, Specific Target Organ Toxicity (Single Exposure) – Category 3, Skin Irritation – Category 2, Eye Irritation – Category 2B, Skin Irritation – Category 2A, Chronic Aquatic Toxicity – Category 2B

- **Pictograms**:

- **Signal Word**: Danger

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SDS Requirements

- SDSs must be readily accessible to workers when they are in their work areas, during each work shift
- Hazard communication works when employers also use SDS information to make sure that proper protective measures are being implemented
Safety Data Sheets

• Distribution
  • An updated SDS must be provided with products shipped by June 1, 2015
  • Companies are not required to send new SDSs to previous customers who may still have the product in inventory
  • New SDSs do not have to be provided for chemicals no longer produced
For years these two labeling systems were acceptable to OSHA for labeling portable containers in the workplace.
Labels

• Workplace Labeling
  • No change to general workplace labeling requirements
  • HMIS labels and NFPA ratings, by themselves, are not sufficient for workplace labels
  • NFPA rating systems used for emergency response
• Before the June 1, 2015 deadline, employers may use labels compliant with HCS 1994
Your HazCom 2012 Program

Between now and June 1, 2016 you need to consider doing the following:

• Conduct a thorough review of all hazardous chemicals and substances used or stored at your facility.
• Develop a list (this is required).
Your HazCom 2012 Program

• On your list place a MSDS column and a SDS column.
• Go through your entire list and contact the manufacturer by phone or go on their website and ask for/download an SDS.
• If the SDS is available get it.
• If not make sure you at least have the MSDS.
• Place a check in the SDS column every time you are successful obtaining the SDS.
Your HazCom 2012 Program

• Then every 3 to 6 months go back to your list and attempt to obtain more SDS’s until you get them all.

• Remember there is a phase in process so you will not be successful obtaining SDS’s right away.
Your HazCom 2012 Program – Labeling

• Make sure your program properly addresses labeling, especially labeling of portable containers in the workplace.

• Labels for portable containers in the workplace must have either:
  • The same information as the manufacturer label with the exception of the manufacturer’s address or...
  • Product identifier and words, pictures, symbols or combination which provide employees with specific information regarding the health and physical hazards of the chemical.
HazCom 2012 Summary

- Develop a written program describing how the standard elements are implemented.
- Maintain a list of all hazardous chemicals.
- Obtain and make data sheets available to employees.
- Train your employees on the new SDS and label requirements.
Example of Training Certificate

CERTIFICATE OF TRAINING
HAZCOM 2012

This is to certify that I have attended the above training program which has informed me of the following:

☐ Reviewed some of the common health and physical hazards of chemicals.
☐ Discussed what has not changed in the hazard communication standard such as:
  - Written program - Chemical list - Safety Data Sheets - Training - Non-routine tasks
☐ Covered the major changes to the hazard communication standard mainly:
  - Safety Data Sheets - Labeling
☐ Material Safety Data Sheets (MSDS) are now called Safety Data Sheets (SDS).
☐ Safety Data Sheets are now standardized and include 16 sections instead of 9 previously.
☐ Reviewed sample SDS.
☐ Labels now require 6 specific items which are: - Name - Signal Word - Hazard Statement
  - Pictograms - Precautionary Statements - Name, address and phone number of manufacturer
☐ Reviewed sample label as well as all 9 pictogram symbols.
☐ Discussed the implementation dates for training, SDS and labels.

Date

Employee Signature

Date

Trainer’s Signature

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Example of Training Quiz

GHS Pictogram Quiz

Match the Pictogram to the correlating Hazards

1. Acute Toxicity: The adverse effects of a substance that result either from a single exposure or from multiple exposures in a short space of time. May be Fatal or Toxic.
2. Oxidizing Agent: Strong oxidizers are capable of forming explosive mixtures when mixed with combustible, organic or easily oxidized materials.
3. Aquatic Toxicity: The effects of manufactured chemicals and natural materials and activities on aquatic organisms.
4. Health Hazard: Substance may be a carcinogen, can damage eyes, lungs, or other target organs; can also be a sensitizer, mutagen, or be a respiratory sensitizer.
5. Corrosion: Causes Skin Corrosion or Burns, can cause eye damage. Corrosive to metals.
6. Gases Under Pressure including compressed gasses, liquefied gasses. Gas released may be very cold. Gas container may explode if heated.
7. Explosives: Explosive articles, and substances as well as mixtures and articles that are manufactured to produce a practical explosive or pyrotechnic effect.
8. Flammables: Flammable gasses, liquids, or aerosols; self reactive or pyrophoric material; self-heating substances and mixtures, organic peroxides.
9. Irritant: Harmful to the skin or eyes, a skin sensitizer or respiratory irritant, may experience narcotic effects.

Countries all over the world are beginning to adopt the United Nations' universal approach to classifying and communicating chemical hazards. The GHS pictograms are provided to assist in evaluating the GHS label elements. Chemical hazard communication is used to identify hazardous products for:
- Chemical Risks
- Health Risks
- Environmental Risks

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Frequently Asked Questions

• Will the NFPA change their warning numbers 0-4 minor to major to the GHS 1-4 major to minor hazards to eliminate confusions between the order of hazards?
• What will be required to compliment an HMIS label for a secondary container after 6/1/2015?
• Will the GHS labeling requirement affect "transfer containers?" For example, can an employer make their own labels using generic words along with the appropriate pictogram [WARNING - LUBE OIL w/ flame pictogram, etc.]?
• Is an MSDS required for all products produced at a facility i.e. animal feed and feed ingredients
• Can you still use old labels for material that is still in stock after the date for the new labels goes into effect?
Combustible Dust

- HazCom 2012 does not define combustible dust, but defines it as a “hazard, other them chemical”
- OSHA provides guidance through
  - OSHA’s Combustible Dust National Emphasis Program Directive CPL 03-00-008
  - NFPA standards
  - Grain Handling Standard
    - Shipments of products that could produce combustible dusts e.g. whole grain when used in processing or where dust is produced is subject to new rule
    - Grain handling facility could be classified as the manufacturer, distributor and user!
Combustible Dust, cont.

- Materials that present a combustible dust hazard in their shipped form must be labeled.

- Special labeling (f)(4): label may be shipped with the safety data sheet for solid materials that present a hazard only when processed or used downstream.

- The SDS must include the following information:
  - List the classification in Section 2
  - Signal word (Warning)
  - Hazard statements
• However, food products such as grain are already covered under FDA provisions and are exempted from OSHA labeling requirements. In addition, there are letters of interpretation that state bulk shipments are exempted from labeling.

• Yet, OSHA says that materials that present a combustible dust hazard in their shipped form must be labeled

• This could set potential precedent for “backdoor” rulemaking. That is, topics added to a final rule that were not available for public comment during the rulemaking process.

• NGFA along with several other agribusiness organizations has filed a legal petition to review in order to challenge combustible dust requirements.
Despite losing sweep auger cases in litigation, OSHA continued issuing citations, leaving employers with the following options:

• Accept citation and face risk of Repeat violations (w/ penalties of $70,000+ per violation)
• Challenge citations and incur legal fees
• Not empty bins in economical or efficient manner
Sweep Auger Settlements

• Illinois company cited despite using both administrative & engineering controls to keep employees out of danger zone

• Area Director had personal knowledge of sweep auger operations

• OSHA withdrew citation and agreed to settlement terms that provided guidance re: acceptable alternative sweep auger operations
10 Sweep Auger Safety Principles

1. Follow 1910.272 permit requirements
2. De-energized & LO/TO sweep and sub-floor augers before setting-up/digging-out
3. Install and secure grates over sub-floor auger
4. Sweep auger must be guarded as designed by manufacturer
5. No walking on grain at depths presenting an engulfment hazard
6. Rescue trained & equipped observer posted outside the bin
10 Sweep Auger Safety Principles

7. Use engineering controls to prevent contact with auger (use of administrative controls alone is insufficient)

8. Use speed control mechanism or bin stop device to prevent uncontrolled rotation of the sweep auger

9. No hands, legs, or other similar means to manipulate an operating auger

10. To adjust auger, it must be unplugged (w/ plug controlled by adjuster) or locked out
Acceptable Engineering Controls

• Auger equipped with **Attached Guard Rail** to prevent contact with unguarded front portion of the sweep auger.

• A **Portable Guard Rail** maintained at least 7’ behind the sweep auger while operator is in the enclosure.
Acceptable Engineering Controls

• **Safety Handle** w/ dead-man switch located at least 7’ behind auger that allows operation only when operator is in contact w/ handle

• A portable **Operator Guard Rail Enclosure** equipped with a dead-man switch, which only allows operation while operator is in the enclosure
Sweep Auger Memorandum

• On May 3 OSHA issued a memorandum to its Regional Administrators providing “guidance” on sweep auger operations. The document was based on the aforementioned settlement and addresses key issues such as definition of “guarded” and if an employee can be in a bin with energized equipment.

• The Safety, Health and Environmental Quality Committee is developing a guidance document on how to implement a sweep auger policy based upon the May 3 memo.

• OSHA has agreed to archive the 2009 sweep auger letter.
Education and Training

Education

• “Grain Bin Safety: Protection You and Your Family”
  o NGFA and NCGA safety training DVD

• “Your Safety Matters”
  o NGFA and GEAPS safety training DVD

• “Don’t Go With the Flow”
  o NGFA and Purdue University entrapment rescue training video

• Guidance for Sweep Auger Operations in Grain Bins
  o Provides basic concepts that assists grain handling facilities in developing and implementing a sweep auger operations

• Permit Required Confined Space/Boot Pit Evaluation Guide for Grain Elevators
  o Provides basic concepts that assists in evaluating boot pits under OSHA’s permit-required confined space program
Education and Training

Training

• How to Prepare for an OSHA Inspection
  • January 13 in Denver, CO

• Safety Seminars
  • January 21 in Nebraska
  • February 5 in Oklahoma City
  • March 26 in Fargo, ND

Thank You

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