New OSHA Sweep Auger Enforcement Policies...

How They Will Affect You!

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Presented by:

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ERIC J. CONN is the Head of the OSHA Practice Group at Epstein Becker & Green, where he focuses on all aspects of occupational safety & health law:

• Represents employers in inspections, investigations & enforcement actions involving OSHA, CSB, MSHA, & EPA

• Responds to and manages investigations of catastrophic industrial, construction, and manufacturing workplace accidents, including explosions and chemical releases

• Handles all aspects of OSHA litigation, including criminal matters, appeals of citations, and negotiation of settlements to minimize effect of enforcement on civil actions and future enforcement

• Conducts safety training & compliance counseling
OSHA Enforcement in the Grain Industry

Grain Handling

OSHA has developed this webpage to provide workers, employers, and safety and health professionals with useful, practical, and current safety and health information on grain handling facilities.

What are grain handling facilities?

Grain handling facilities include facilities that may receive, handle, store, process and ship bulk raw agricultural commodities such as (but not limited to) corn, wheat, oats, barley, sunflower seeds, and soybeans. Grain handling facilities include grain elevators, feed mills, flour mills, rice mills, dust pelleting plants, dry corn mills, facilities with soybean flaking operations, and facilities with dry grinding operations of soybeans.

What are the hazards in grain handling facilities?

The grain handling industry is a high hazard industry where workers can be exposed to numerous serious and life threatening hazards. These hazards include: fires and explosions from grain dust accumulation, suffocation from entrapment in grain bins, falls from heights and crushing injuries and amputations from grain handling equipment.

Suffocation is a leading cause of death in grain storage bins. In 2010, 51 workers were engulfed by grain stored in bins, and 26 died—the highest number on record, according to a report issued by Purdue University [193 KB PDF, 5 pages]. Suffocation can occur when a worker becomes buried (engulfed) by grain as they walk on moving grain or attempt to clear grain build up on the inside of a bin. Moving grain acts like "quicksand" and can bury a grain gun operator or a worker to get out of it without assistance. OSHA has sent notification letters to approximately 1,000 grain elevator operators warning the employers to not allow workers to enter grain storage facilities without proper equipment, precautions (such as turning off and locking/tagging out all equipment), and training.

Grain dust explosions are often severe, involving loss of life and substantial property damage. Over the last 35 years, there have been over 500 explosions in grain handling facilities across the United States, which have killed more than 180 people and injured more than 675. Grain dust is highly combustible and can burn or explode if enough becomes airborne or accumulates on a surface and finds an ignition source (such as hot bearings, overheated motor, misaligned conveyor belt, welding, cutting, and brazing). OSHA standards require that both grain dust and ignition sources must be controlled in grain elevators to prevent these often deadly explosions.

Falls from height can occur from many walking/working surfaces throughout a grain handling facility. Examples of such surfaces include (but are not limited to) floors, workers move from the vertical exterior ladders on grain bins to the bin roof or through a bin entrance.

Mechanical equipment within grain storage structures, such as augers and conveyors, present serious entanglement and amputation hazards. Workers can easily get their limbs caught in improperly guarded moving parts of such mechanical equipment.
Increased Enforcement

• Director of OSHA sent letters to 13,000 grain handlers warning of engulfment hazards

• Issued 2010 “Fact Sheet” regarding bin entry hazards and regulations

• Set the stage for issuance of Willful violations
Local & Regional Enforcement Programs for Grain

- **Region V** (IL, IN, MI, MN, OH, WI)
- **Region VI** (AR, LA, NM, OK, TX)
- **Region VII** (IA, KS, MO, NE)
- **Region VIII** (CO, MT, ND, SD, UT, WY)
- **Region X** (AK, ID, OR, WA)
## Grain LEP Enforcement Data

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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<tbody>
<tr>
<td>Inspections Conducted</td>
<td>238</td>
<td>296</td>
<td>380</td>
<td>629</td>
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<tr>
<td>Inspections Resulting in Violations</td>
<td>198</td>
<td>225</td>
<td>281</td>
<td>436</td>
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<tr>
<td>Total Violations Issued</td>
<td>858</td>
<td>1,289</td>
<td>1,552</td>
<td>1,343</td>
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</table>
# Grain LEP Enforcement Data

## 10 Most Frequently Cited Standards

<table>
<thead>
<tr>
<th>Standard Description</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Handling Facilities</td>
<td>§ 1910.272</td>
</tr>
<tr>
<td>Mechanical Power-Transmission Apparatus</td>
<td>§ 1910.219</td>
</tr>
<tr>
<td>Guarding Floor and Wall Openings and Holes</td>
<td>§ 1910.23</td>
</tr>
<tr>
<td>Permit-Required Confined Spaces</td>
<td>§ 1910.146</td>
</tr>
<tr>
<td>Electrical Safety</td>
<td>§§ 1910.305 &amp; 303</td>
</tr>
<tr>
<td>Fixed Ladders</td>
<td>§ 1910.27</td>
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<tr>
<td>Hazard Communication</td>
<td>§ 1910.1200</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>§ 1910.134</td>
</tr>
<tr>
<td>Personal Protective Equipment</td>
<td>§ 1910.132</td>
</tr>
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</table>
Grain LEP Enforcement Data

<table>
<thead>
<tr>
<th>10 Most Frequently Cited Grain Standards</th>
<th>§ 1910.272(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement written housekeeping program</td>
<td>§ 1910.272(j)(1)</td>
</tr>
<tr>
<td>Train employees for special tasks</td>
<td>§ 1910.272(e)(2)</td>
</tr>
<tr>
<td>Provide harness/lanyard for employees entering bins at or above the level of grain</td>
<td>§ 1910.272(g)(2)</td>
</tr>
<tr>
<td>Issue permits prior to bin entries</td>
<td>§ 1910.272(g)(1)(i)</td>
</tr>
<tr>
<td>Provide rescue equipment for bin entry</td>
<td>§ 1910.272(g)(4)</td>
</tr>
<tr>
<td>Test atmosphere before entering bins</td>
<td>§ 1910.272(g)(1)(iii)</td>
</tr>
<tr>
<td>Keep certification records of PM inspections</td>
<td>§ 1910.272(m)(3)</td>
</tr>
<tr>
<td>Train employees for special tasks</td>
<td>§ 1910.272(e)(1)(ii)</td>
</tr>
<tr>
<td>Provide specific procedures and safety practices</td>
<td>§ 1910.272(e)(1)(ii)</td>
</tr>
<tr>
<td>Implement emergency action plan</td>
<td>§ 1910.272(d)</td>
</tr>
<tr>
<td>Deenergize equipment inside bins before entry</td>
<td>§ 1910.272(g)(1)(iii)</td>
</tr>
</tbody>
</table>
Sweeping Changes to OSHA’s Sweep Auger Enforcement Policy

A for years of confusion and frustration in the grain industry regarding how to operate sweep augers without running afoul of Occupational Health and Safety Administration (OSHA) regulations, OSHA has finally issued an enforcement policy for US employers that identifies the conditions that must be met to allow employees back inside grain bins with operating sweep augers.

Following a groundbreaking settlement of a OSHA case against an Illinois grain company under the OSHA Review Board, the final rule included the general statement about equipment inside grain bins at § 1910.272(w)(1)(i)(4).

A mechanical, electrical, hydraulic, and pneumatic equipment that presents a danger to employees inside grain storage structures shall be disengaged and the line be disconnected, locked-out and tagged-off, or otherwise prevented from use.
Historic Sweep Auger Enforcement

- Grain Standard includes no provision re: sweep augers or work inside bins with sweep augers.

- General requirement re: equipment inside bins:

  1910.272(g)(1)(ii): “All mechanical, electrical, hydraulic, & pneumatic equipment which presents a danger to employees inside grain storage structures shall be deenergized & shall be disconnected, locked-out & tagged, blocked-off, or otherwise prevented from operating by other equally effective means or methods.”
Sweep Auger Interpretations

Series of Interpretation Letters beginning in 2008 changed enforcement landscape

Question 1: Can an unguarded sweep auger be in operation (energized) in a grain storage bin while a worker is inside the bin?

Response 1: No. OSHA’s standard at 29 CFR 1910.272(g)(1)(i) states:

All mechanical, electrical, hydraulic, and pneumatic equipment which presents a danger to workers shall be deenergized and shall be disconnected, locked-out and tagged, blocked-off, or otherwise prevented from operating by other equally effective means or measures. [emphasis added].

Also, with respect to entry into flat storage structures, covered by paragraph (h), Section 1910.272(h)(2)(i) provides:

Whenever an employee walks or stands on or in stored grain or grain products of a depth which poses an engulfment hazard, all equipment which presents a danger to the employee (such as an auger or other grain transport equipment) shall be deenergized, and shall be disconnected, locked-out and tagged, blocked-off, or otherwise prevented from operating by other equally effective means or methods.

We note that workers face a number of hazards whenever they enter a grain storage bin. For example, workers may face an engulfment hazard inside a storage bin when grain is being drawn off to the bottom by an auger. Flowing or moving grain produced from an auger might also result in a tripping or slipping hazard that could cause the worker to accidentally fall into the machinery. In addition, a danger may exist to workers from energized equipment when grain is not flowing or moving. For example, a worker who is required to regularly adjust an unguarded moving auger, in order for it to work correctly, may slip, trip, or fall and be placed in the path of the moving auger.

OSHA’s standards clearly provide that if a danger to a worker exists, all equipment inside grain storage facilities must be disconnected, locked-out and tagged, blocked-off or prevented from operating by other means or methods. The standards do provide some flexibility to employers for ensuring that equipment is not operating and does not present a danger to workers inside the storage structure. However, based on the additional information provided in your October 15th letter, OSHA is not aware of any effective means or method that would protect a worker from the danger presented by an unguarded sweep auger operating inside a grain storage structure. Accordingly, unless the employer can eliminate all hazards presented by an energized unguarded sweep auger, operating such a device with workers inside a grain storage structure would be in violation of Section 1910.272(g)(1)(i) or Section 1910.272(h)(2)(i).
Congressional Intervention

• OSHA rejected the industry’s attempts to educate OSHA about sweep auger operations


• OSHA issued additional Interpretation Letters in May 2011 & February 2012

• Neither letter listed alternative sweep auger procedures that would satisfy the “other equally effective means or methods” language of 1910.272(g)(1)(ii)
Enforcement and Cases

• Interpretation Letters combined w/ Grain Emphasis Programs led to surge of sweep auger citations

• 2 cases (fed OSHA & Maryland OSHA) resulted in ALJ decisions vacating sweep auger citations b/c OSHA could not prove that:
  – Employees worked in the “zone of danger”; or
  – The sweep augers were inadequately guarded

• Neither case became binding legal precedent
Enforcement and Cases

Despite losing sweep auger cases in litigation, OSHA continued issuing citations, leaving employers with the following options:

1. Accept citation and face risk of Repeat violations (with penalties of $70,000+ per violation)
2. Challenge citations and incur legal fees
3. 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
Sweep Auger Settlements

• Settlement incorporated **10 Sweep Auger Safety Principles** that permit employees inside grain bins w/ energized sweep augers

• 10 Sweep Auger Safety Principles were reviewed and approved by OSHA’s National Office in Washington, DC

• Area Director, Regional Administrator, and Deputy Assistant Sec’y of Labor indicated OSHA’s intent for 10 Sweep Auger Safety Principles to become federal OSHA policy
OSHA’s New Sweep Auger Enforcement Memorandum

- May 3, 2013 Enforcement Memorandum from Director of Enforcement Programs to all Regional Administrators & State Plans Designees
- Essentially identical to Illinois settlements
- Key differences
  - Guarding on augers
  - Additional entrants
  - Potential exposure is enough
1. Follow 1910.272 permit requirements

2. De-energized & LO/TO sweep and subfloor augers before setting-up/digging-out

3. Install & secure grate/guard over subfloor auger

4. Guard the top and back of the sweep auger

5. Post a rescue-trained & equipped observer outside the bin

6. No walking on grain that is deep enough to present an engulfment hazard
10 Sweep Auger Safety Principles

7. Do not use hands, legs, or other similar means to manipulate/dislodge an energized sweep auger

8. Install a speed control mechanism or bin stop device to eliminate the uncontrolled rotation of the sweep auger around the bin

9. To adjust or perform maintenance on a sweep auger, it must be unplugged (w/ plug controlled by adjuster) or locked out

10. Implement engineering controls to prevent contact with an energized sweep auger
Acceptable Engineering Controls

- Auger w/ **Attached Standard Guard Rail** (compliant w/ OSHA’s Machine Guarding standards)

- **Portable Guard Rail** maintained at least 7’ behind sweep auger

- Portable **Operator Standard Guard Rail Enclosure** w/dead-man switch (only allows auger to operate when worker is within)

- Auger w/ **Control Mechanism** (e.g., a **Safety Handle** w/dead-man switch) that only allows auger to operate when operator is in contact w/ the controls (worker must be positioned at least 7’ behind sweep auger)
State Plan Adoption?

- Iowa OSHA expressed unwillingness to adopt the May 3rd Enforcement Memo

- Iowa OSHA’s Zero-Bin Entry Policy:
  - IOSHA has maintained a “Zero-Bin Entry” Policy w/energized sweep augers since fed OSHA’s ‘09 Interpretation Letter
  - IOSHA has not, however, issued a public record that memorializes that policy (e.g., enforcement memo, interpretation letter, etc.)
  - IOSHA also has not engaged in a formal rulemaking process to change its version of the Grain Standard (which currently parallels fed OSHA’s standard)
Future of Sweep Auger Enforcement

- Highest levels of OSHA involved in approval of Illinois Settlements, the 10 Sweep Auger Safety Principles, and specific Engineering Controls / Procedures

- National OSHA Enforcement Memorandum supporting the Sweep Auger Safety Principles

- **However**, OSHA did not archive its ‘09 Interpretation Letter or the Letters to Sen. Grassley and Rep. Noem

- NGFA developing industry guidance document based on the IL settlements and OSHA’s Enforcement Memo

- Implementation issues:
  - LO/TO of subfloor auger during dig out
  - Proving employee exposure
  - Use of Safety Principles as mandatory, checklist
  - Guarding around center sump
QUESTIONS?
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