

**National Grain
and Feed Association**



INTERWEST
INSURANCE SERVICES, INC.

Calif. Specific - Combustible Dust, Flat Storage v. Bin Storage and Confined Space

Scott Pitman

InterWest Insurance Services

October 15, 2014

Fresno, Calif.



Presentation Objectives

- Understanding Cal/OSHA Enforcement -
- What Does This Mean for Your Facility?
- How Can They Directly Impact You?
- Compliance?



Most Sited 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 de-energize 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.

OSHA's Acknowledge 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



Combustible Dust Regulations and Compliance

The three parties, other than stakeholders, that are primarily involved in the combustible dust rulemaking process, include:

- Occupational Safety and Health Administration (OSHA) & (CAL/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).

Combustible Dust – Calif. Requirements

§5174. Combustible Dusts - General.

- *Most combustible materials and some materials not usually considered combustible when reduced to dust or powder form, present an explosion hazard when mixed with air*
- Any action which liberates combustible dust that exceeds or may reasonably be expected to exceed a concentration of 25 percent of its lower explosive limit in air shall not be permitted unless all sources of ignition are eliminated or are identified and specifically controlled



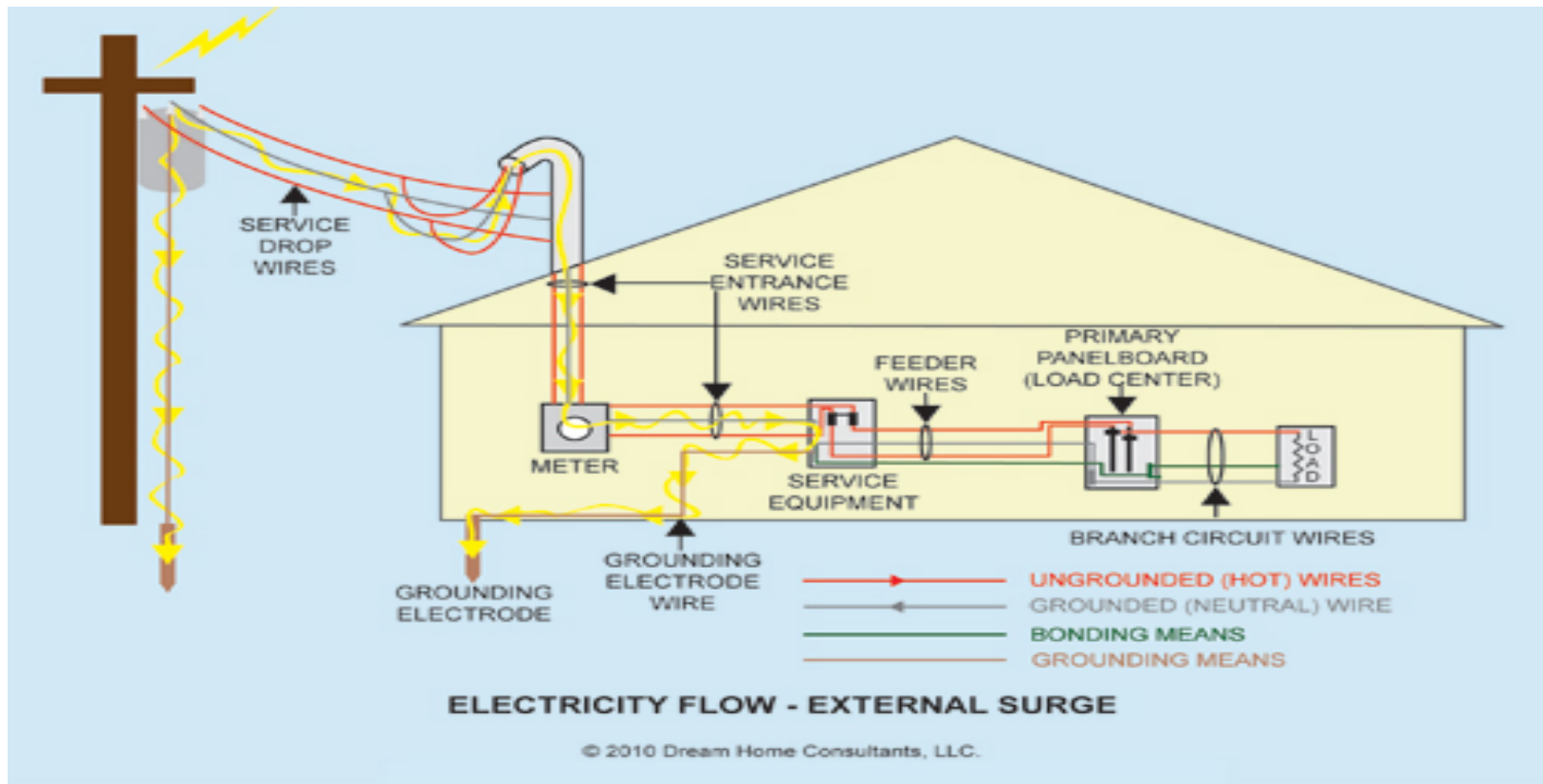
Combustible Dust – California cont.

§5174. Combustible Dusts

- No source of ignition shall be permitted in locations where a hazard of dust explosion exists until all dust-producing operations have been stopped, airborne dust allowed to settle, and accumulated dust removed to an extent which will remove the hazard of the dust explosion
- All machines, conveyors, housings, and conductive surfaces in locations where combustible dusts are generated or are present shall be electrically **bonded to ground** to prevent the accumulation of electrostatic charges which are sufficient to potentially cause dust ignition

Bonded to Ground

- How is your facility wired?



Combustible Dust – California cont.

§3482. Bulk Storage of Loose Material

- No employees shall be permitted to work on or over loose material, or attend an employee working on or over loose material, until they have been instructed in the hazards involved and the precautions that must be taken to prevent employees from being caught in caved-in material
- Note: Work in grain handling facilities shall be in accordance with the provisions of section 5178, Grain Handling Facilities



Flat Storage – Calif. Requirements

§5178. Grain Handling Facilities

- All grain handling facilities, including grain elevators, outdoor flat storage and flat storage structures, feed mills, flour mills, rice mills, dust pelletizing plants, dry corn mills, soybean flaking operations, and the dry grinding operations of soycake
- Definition term "**grain**" includes raw and processed grain, grain products, and cottonseed
- Requirements for the control of grain dust fires and explosions, and certain other safety hazards associated with grain handling facilities



Entry into Flat Storage 1910.272(h)

Federal Standard

- Flat storage – a structure that will not empty completely by gravity, has an unrestricted ground level opening, and must be entered to reclaim the residual grain using powered equipment or manual means



Bin Storage - – Calif. Requirements

§5178. Grain Handling Facilities

- The employer shall either issue written authorization for entering bins, silos, tanks or other confined spaces, or provide a qualified supervisor during the entire operation
- Prior to entering, all mechanical, electrical, hydraulic, and pneumatic equipment which presents a danger to employees inside grain storage structures, flat storage structures or working on outdoor flat storage shall be de-energized and shall be disconnected, locked-out, tagged-out, blocked-out, or otherwise prevented from operating by other equally effective means or methods as prescribed by GISO section 3314

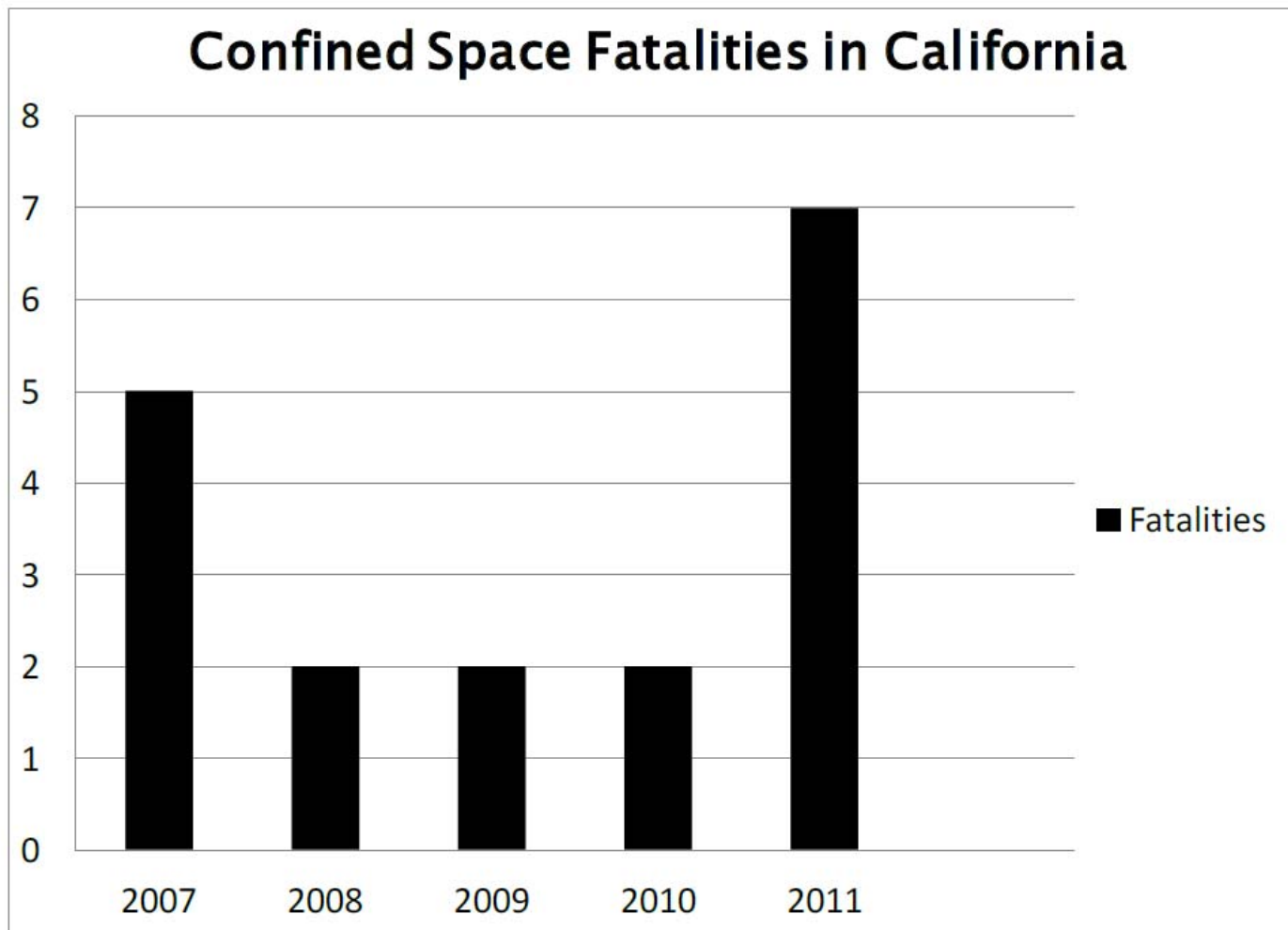
Confined Space Emphasis – California

Why?

- October 2011: Two brothers, aged 16 and 22, died in an underground drainage system at a recycling center when the younger brother was overcome by hydrogen sulfide and his brother rushed to the rescue and was overcome as well
- July 2011: One worker at a commercial laundry died of traumatic asphyxia when he was unloading a large horizontal washer and was pulled into the space and crushed when the washer was inadvertently activated while the worker reached in to unload the machine



Confined Space Emphasis – California



What is a Confined Space?

Confined Spaces Include

- Boilers, vats, kilns, vaults, silos, storage bins, meter vaults, tunnels, tanks, wastewater wet-wells, grit chambers, utility tunnels, crawl spaces under floors, water reservoirs, holding tanks, pits, and sumps



Cal/OSHA - Consultation

- For help on working safely in Confined Spaces
- Toll-free Number: **1-800-963-9424**

- **Onsite Assistance Program Area Offices**
- Central Valley: 559-454-1295 - San Diego/Imperial: 619-767-2060
- No. California: 916 263-0704 - San Bernardino: 909-383-4567
- SF/Bay Area: 510-622-2891 - San Fernando Valley: 818-901-5754
- Santa Fe Springs/LA/Orange: 714-562-5525

Consultation Programs:

<http://www.dir.ca.gov/dosh/consultation.html>



Thank You!

Scott C. Pitman

Risk Manager, InterWest Insurance, Inc.

530.897.3166

scpitman@iwins.com

