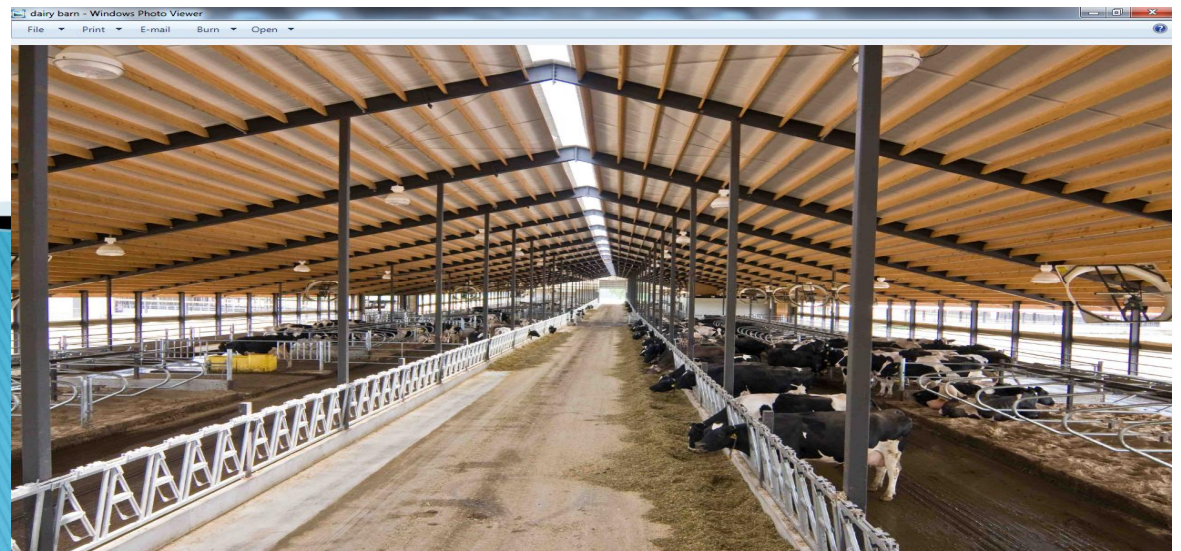




Understanding OSHA Requirements for Dairy Farms September 27, 2013

USDOL/OSHA
Ronald Williams, Compliance
Assistance Specialist
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North Syracuse, NY 13212
315-451-0808 ext. 3002

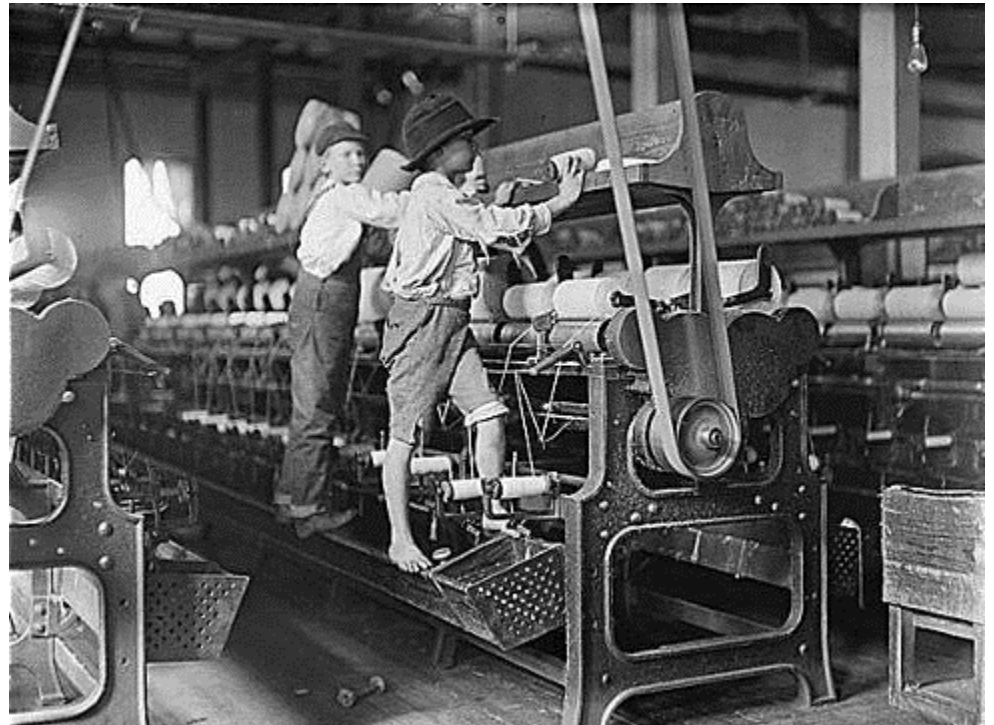


Objectives

- ▶ Discuss the OSHA Inspection Process
- ▶ Hazards in Dairy Operations
- ▶ Question & Answers

OSHA's Mission

- ▶ "To assure so far as possible every working man and women in this nation a safe and healthful working conditions and to preserve our human resources."



Enforcement Exemptions and Limitations under the Appropriations Act - CPL 2-0.51J

- ▶ A farming operation is **exempt** from **all** OSHA activities if it:
 - Employs 10 or fewer employees currently and *at all times* during the last 12 months; and
 - Has not had an active temporary labor camp during the proceeding 12 months.

Family members of farm employers are not counted when determining the number of employees.

A part-time employee is counted as "1" employee.

Key Definitions

- **Farming operation** means any operation involved in the growing or harvesting of crops, the raising of livestock or poultry, or related activities conducted by a farmer on sites such as farms, ranches, orchards, **dairy farms** or similar farming operations.
- **Agricultural employer** means any person engaged in agricultural activity employing one or more employees. Members of the immediate family of the farm employer are not regarded as employees.
- **Immediate family member** means those in **direct relation** to the farm employer, such as a **parent, spouse, or child**. Step-children, foster children, step-parents and foster parents will also be considered as immediate family members. Other relatives, even when living permanently in the same household as the employer, will not be considered to be part of the immediate family. Reference: Fair Labor Standards Act, 29 CFR 780.308 "Definition of immediate family" regarding exemptions under minimum wage and overtime provisions.

Key Definitions (con't)

- Temporary: The term “temporary” in OSHA’s regulation for temporary labor camps (29 CFR 1910.142) refers to employees who enter into an employment relationship for a discrete or defined time period. The term “temporary” refers to the length of employment, and not to the physical structures housing employees.
- Temporary labor camp means farm housing directly related to the seasonal or temporary employment of farm workers.
 - Housing includes both permanent and temporary structures located on or off the property of any employer who meets the definition of a “farming operation.”
 - Temporary labor camp housing means required employer-provided housing that, due to company policy or practice, necessarily renders such housing a term or condition of employment.

Factors for Temp Labor Camps

1. Employers require employees to live in the housing.
2. The housing is in an isolated location or the lack of economically comparable alternative housing makes it a practical necessity to live there.
3. Additional factors to consider in determining whether the housing is a term and condition of employment include, but are not limited to:
 - a. Cost of the housing to the employee – is it provided free or at a low rent?
 - b. Ownership or control of the housing – is the housing owned or controlled or provided by the employer?
 - c. Distance to the worksite from the camp, distance to the work-site from other non-camp residences – is alternative housing reasonably accessible (distance, travel, cost, etc.) to the worksite?
 - d. Benefit to the employer -- does the employer make the camp available in order to ensure that the business is provided with an adequate supply of labor?
 - e. Relationship of the camp occupants to the employer – are those living in the camp required to work for the employer upon demand?



The condition of the camp is not inspected by OSHA.

Immigration Status

- ▶ ALL WORKERS, **EVEN UNDOCUMENTED WORKERS**, HAVE A RIGHT TO A SAFE AND HEALTHY WORKPLACE.
- ▶ OSHA DOES NOT IMPOSE PENALTIES FOR UNDOCUMENTED WORKERS.
- ▶ *Health and safety laws protect all employees regardless of their immigration status.* Therefore, undocumented workers have rights to information regarding their health and safety rights. They have the right to refuse unsafe work if they reasonably believe it would create a real and apparent hazard to them or their co-workers. They also can file health and safety complaints with Occupational Safety and Health Administration.

OSHA WILL NOT
INQUIRE ABOUT
IMMIGRATION STATUS



Major Employer Responsibilities



- Provide a workplace free from recognized hazards
- Comply with OSHA standards and regulations
- Be familiar with standards applicable to their workplace

OSHA Coverage

- ▶ Private Sector Employees
 - Manufacturing
 - Construction
 - Maritime
 - Health Care
 - Warehousing
 - Agriculture ***With Some Limitations***

Enforcement of the Act

- ▶ OSHA rules apply to employee/employer relationships - including Agriculture, however, OSHA cannot conduct inspections unless > 10 non-family members employed at a farming operation or the farming operation had a temporary camp in the past 12 months.

Inspection Priorities

- ▶ Inspection Types:
 - Imminent Danger
 - FAT/CAT – (Fatality/Catastrophe)
 - Complaint / Referral
 - General Schedule (Programmed)

Fatality / Catastrophe

- ▶ Fatality: One or more
- ▶ Catastrophe:
 - Overnight hospitalization of 3 or more employees due to a singular event

Employer must report either to OSHA within 8 hours.



OSHA Hotline: 1-800-321-OSHA
(6742)



Complaints

► Formal

- Signed by a current employee, family member or a representative of a current employee
- Hazard is ongoing, alleges a serious hazard and OSHA has standards that cover the hazard
- Requests on-site inspection

► Non-Formal or Investigation

- Phone/Fax
- Employer responds in writing in 5 days



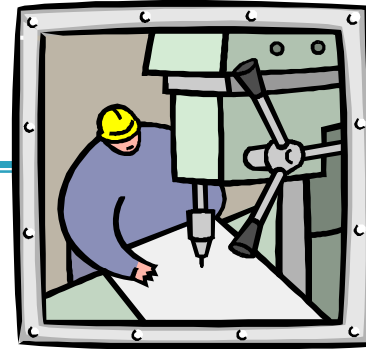
Employee Rights

- ▶ Request OSHA investigation
- ▶ Name withheld from employer & complaint
- ▶ Talk with compliance officers privately
- ▶ Participate in inspection and after inspection action
- ▶ Offered Whistleblower Protection 11(c)
- ▶ Right to see OSHA citations issued to employer
- ▶ Right to access & obtain medical records

Employee Rights

- ▶ Review OSHA standards, rules and regulations available in the workplace.
- ▶ Request information from employer on S&H hazards, precautions, & emergency procedures
- ▶ Receive adequate training and information
- ▶ Receive PPE

Section 11(c)



Discrimination can include:

- Firing or laying off
- Blacklisting
- Demoting
- Denying overtime or promotion
- Disciplining
- Denial of benefits
- Failure to hire or rehire
- Intimidation
- Reassignment affecting future promotions
- Reducing pay or hours

Referral

- ▶ Another Agency
 - Wage & Hour has temporary labor camp jurisdiction and can refer to OSHA
 - Police or Coroner
 - Code Enforcement Officer
- ▶ Another CSHO
- ▶ Self-Referral ("Drive-By")
 - Limited in dairy operations
- ▶ Media



- ▶ The Environmental Protection Agency (EPA) has jurisdiction over employee protection relating to application of pesticides (which also includes herbicides, fungicides, and rodenticides).
- ▶ The EPA Worker Protection Standard (WPS), 40 CFR Part 170, protects employees on farms from occupational exposure to agricultural pesticides which includes provisions for personal protective equipment (PPE), labeling, employee notification, safety training, safety posters, decontamination supplies, emergency assistance, and restricted field entry.
- ▶ EPA regulations are enforced by NYS DEC.
- ▶ OSHA has no authority to issue any citations related to pesticide exposures, pursuant to Section 4(b)(1) of the OSH Act.

General Schedule (Programmed)

- ▶ General Industry
 - Site Specific Targeting (SST)
- ▶ Construction
 - Dodge Reports
- ▶ Emphasis Programs
 - Local LEP
 - Lead, Falls, Warehousing, Logging,...
 - National NEP
 - Combustible Dust, Lead, Silica, Trenching/Excavating...

CSHO

- ▶ Compliance Safety and Health Officer
- ▶ Safety and/or Health Disciplines
- ▶ Authorized to Enter Workplace Without Advanced Notice
- ▶ Inspect & Investigation Conditions
- ▶ Question Privately Employees and Employer

On-Site Inspections

- ▶ Presentation of Credentials
- ▶ Opening Conference
- ▶ Records Review
- ▶ Program Review
- ▶ Walkaround
- ▶ Closing Conference



Legal Sufficiency: Documentation of Violations

▶ Violation

- Exposure to Hazard
 - Activity
 - How often
 - Training
 - Exact Distances
- Hazard Cause Harm
- Employer Knowledge
- Existing Standard

Post Inspection Element

- Citation Issuance
 - Classification
 - Penalties
- Appeal Process
 - Informal Conference
 - Contest Rights
- Final Order
- Abatement Submission

Contractors On-Site

- ▶ OSHA Instruction CPL 2-0.124: Multi-Employer Citation Policy.



Whose problem is it?



Whose problem is it?



It's Everyone's Problem!!!

- ▶ Creating
 - Who maintained the pump?
- ▶ Controlling
 - Who Has Oversight/Authority for The Pump?
- ▶ Exposing
 - Whose Employees Use The Pump?
- ▶ Correcting
 - Who Was to Fix the Pump?

Standards Relating to Agriculture

- ▶ 29 CFR 1928: Agriculture
- ▶ 29 CFR 1910: General Industry: As Referenced
- ▶ General Duty Clause:
 - Section 5(a)(1)

Recordkeeping

- Employers of 11 or more employees must maintain records of occupational injuries and illnesses

The image displays two OSHA forms. The top form is OSHA's Form 300, titled "Log of Work-Related Injuries and Illnesses". It is a detailed log with columns for the date, employee's name, a description of the injury or illness, and a grid for recording the number of days lost or restricted work activities. The bottom form is OSHA's Form 300A, titled "Summary of Work-Related Injuries and Illnesses". It provides a summary of the data from Form 300, including the number of cases, number of employees, and number of days lost or restricted work activities. Both forms include instructions and a signature section at the bottom.

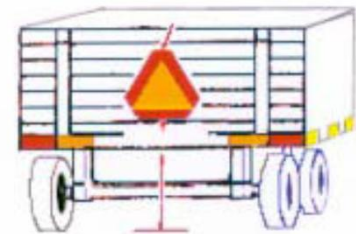
1904.2 - Recordkeeping

- ▶ All industries in agriculture, construction, manufacturing, transportation, utilities and wholesale trade sectors are covered
- ▶ 1904.1 – Size Exemption:
 - If your company had 10 or fewer employees at all times during the last calendar year, you do not need to keep the injury and illness records unless surveyed by OSHA or BLS



General Industry When Referenced in 1928.21(a)

- ▶ **1928.21(b)** Except to the extent specified in paragraph (a) of this section, the standards contained in Subparts B through T and Subpart Z of part 1910 of this title do not apply to agricultural operations.
- ▶ **1928.21(a)**: The following standards in part 1910 of this Chapter shall apply to agricultural operations:
 - ▶ **1928.21(a)(1)**: Temporary labor camps - 1910.142;
 - ▶ **1928.21(a)(2)**: Storage and handling of anhydrous ammonia - 1910.111(a) and (b);
 - ▶ **1928.21(a)(3)**: Logging Operations - 1910.266;
 - ▶ **1928.21(a)(4)**: Slow-moving vehicles - 1910.145
 - ▶ **1928.21(a)(5)**: Hazard communication - 1910.1200
 - ▶ **1928.21(a)(6)**: Cadmium - 1910.1027
 - ▶ **1928.21(a)(7)**: Retention of DOT markings, placards and labels - 1910.1201



Agricultural Standards: 1928

▶ 1928.51

- Roll-over protective structures (ROPS) for tractors used in agricultural operations.

▶ 1928.57

- Guarding of farm field equipment, farmstead equipment, and cotton gins.

▶ 1928.110

- Field Sanitation.



General Duty Clause

- ▶ Section 5(a)(1) of the Act

"Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees."

- ▶ Applies when there is no specific standard



General Duty Clause Elements

Employee Exposure
Serious Hazard
Employer Knowledge
Abatement Method
Recognition

Hazards Identified on Dairy Farms ("Dairy Dozen")

1. Manure Storage and Collection Structures
2. Dairy Bull and Cow Behavior / Worker Positioning
3. Electrical Systems
4. Skid Steer Operation
5. Tractor Operation
6. Guarding of Power Take-Offs (PTOs)
7. Machine Guarding: Field and Farmstead Equipment
8. Lockout – Unexpected Energy Release
9. Hazard Communication
10. Confined Spaces
11. Horizontal Bunker Silos
12. Noise



1. Manure Storage Facilities and Collection Structures [Section 5(a)(1)]

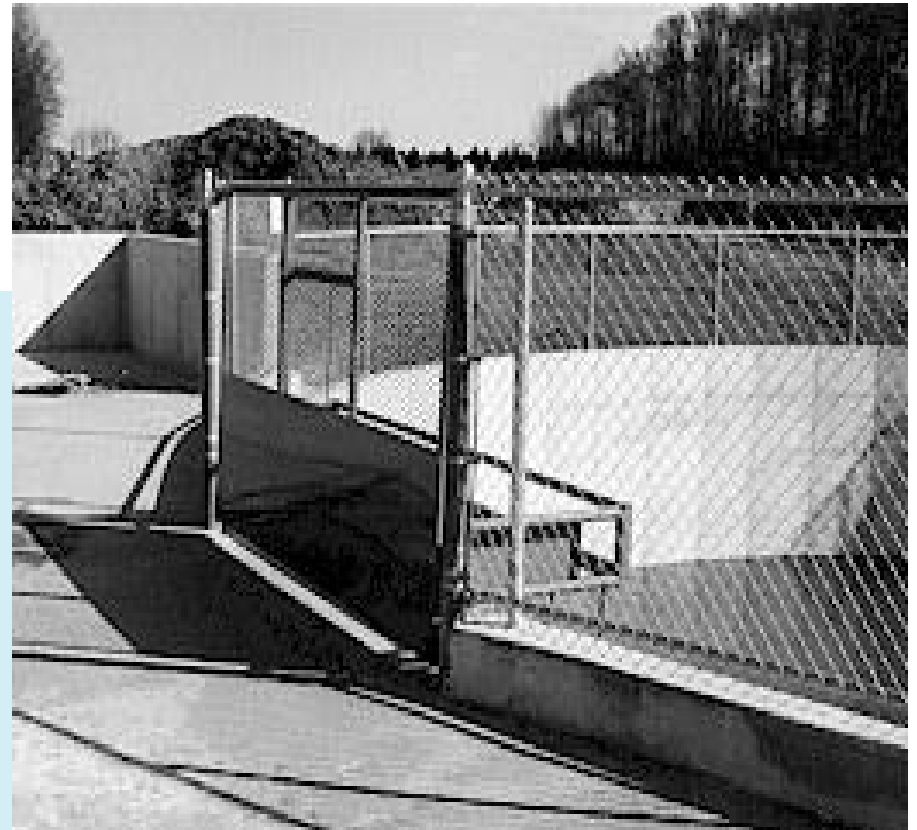
Fatal or serious drowning hazards may exist where farm vehicles such as tractors, manure spreading trucks, manure pumps/agitators, and skid-steers are operated in near proximity to waste storage impoundments and structures without the benefit of control measures, such as

- 1) safety stops and/or gates at manure push-off ramps and load-out areas to prevent accidental entry of machinery; and

Guidance document

American Society of Agricultural and
Biological Engineers **ASABE EP 470.1**
Manure Storage Safety

6.1.5 All push off platforms or piers for open, below-ground manure storage structures need a barrier strong enough to stop a slow moving tractor or skid loader.



Manure Storage Facilities and Collection Structures

2) warning signs, fences, ladders, ropes, bars, rails and other devices to restrict the accidental passage of vehicles and personnel across outdoor earthen manure storages.

Guidance document

ASABE EP 470.1 Manure Storage Safety

6.1.6 Open storages should be *fenced* in unless they are aboveground tanks. Warning signs should be posted.

8.5 Warning sign contents and safe management suggestions

8.5.3 Earthen storages. Warning sign(s) should be located on the fence near the entry gate that prohibit entry to the storage should be posted.

e.g. Do Not Enter, Drowning Hazard.

8.5.3.1 “Danger Manure Storage”, “Danger Keep Out”, “Danger Keep Away”



Manure Storage Facilities and Collection Structures

Fatal or serious inhalation hazards of gases including hydrogen sulfide (H_2S), carbon dioxide (CO_2), methane (CH_4), and ammonia (NH_3) may exist where manure gases are generated through the handling of liquid or semi-solid manure through activities such as pumping, mixing, agitating, spreading, or cleaning-out. Oxygen (O_2) deficiency hazards are an additional related concern.

Confined Spaces (1910.146) need:

- Written Program
 - How will you test for gases?
 - How will you prevent employee exposure?
- Training exercise
 - Everyone knows their responsibilities
 - Practice with equipment
 - Discuss additional risks identified in practice
- Rescue Plan
 - Calling 911 isn't enough

Manure Pits-Lagoons [Section 5(a)(1)]

- ▶ Established Standard:
 - American Society of Agricultural and Biological Engineers (ASABE)
 - ASEA EP470 Jan 1992 (R2005)
 - Manure Storage Safety
 - Waste Storage Facility
 - Natural Resources Conservation Service
 - Code 313
- ▶ Hazard: Hazardous Atmosphere, Falls

Fence -Barriers Around Lagoon



Entry Concern



Guarding Access/Prevent Backing into Lagoon: Agitating

No ROP
on this
tractor



PTO Shaft
Unguarded

Pumping Activity: 50,000 lbs



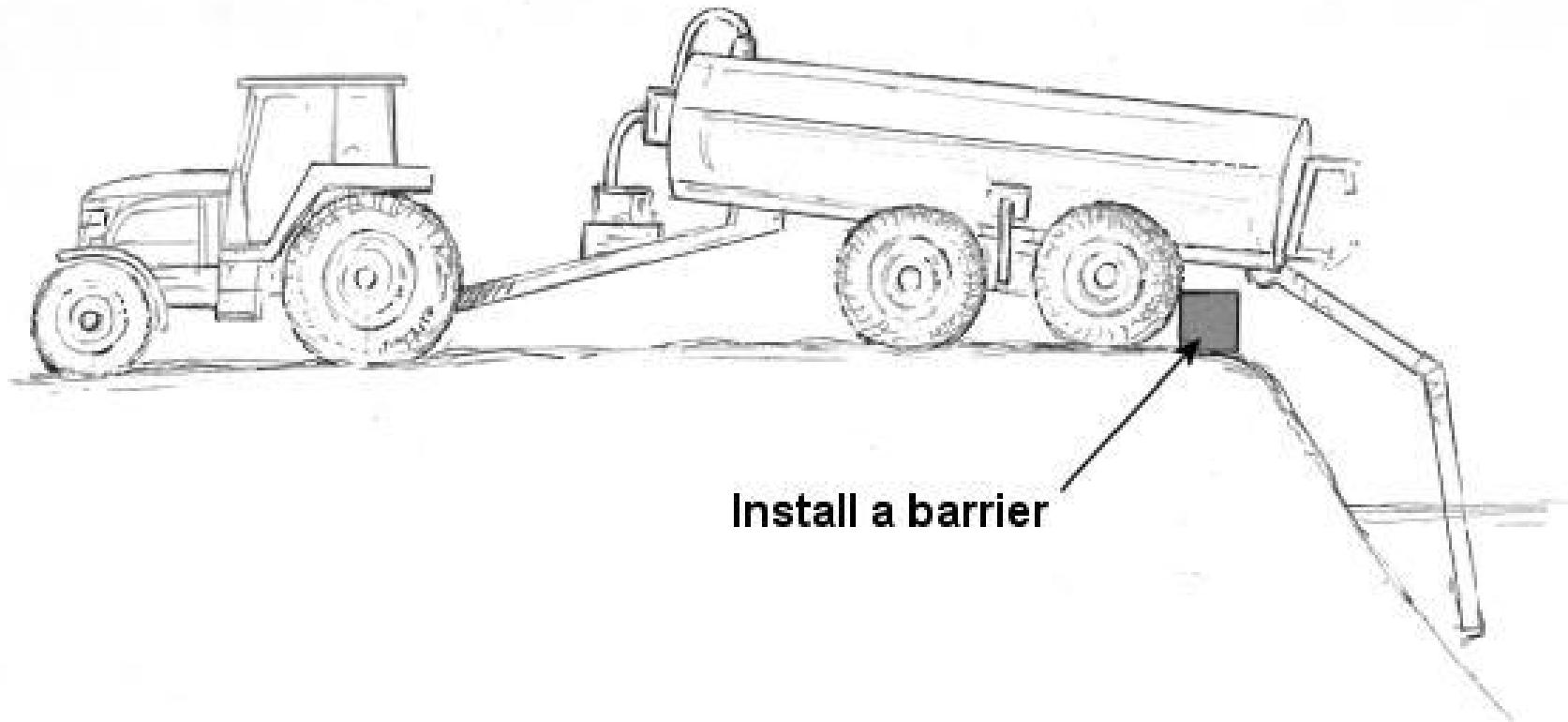
Manure Tanker in Pit



Worker Exits Tractor w/Tires Turning



Barrier Required Firm Foundation to Support Weight of a Filled Trailer



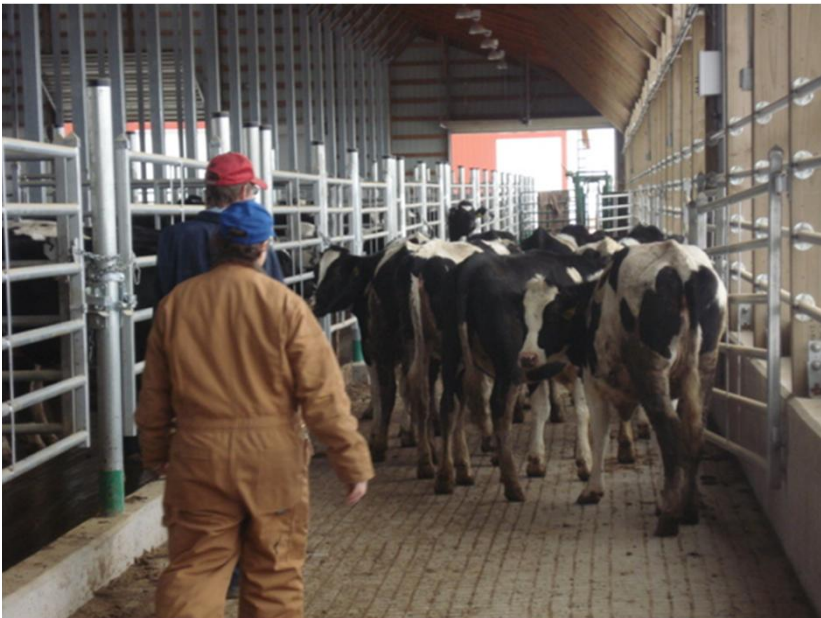
Install a barrier

Longer Pumping System



2. Dairy Bull and Cow Behavior / Worker Positioning [Section 5(a)(1)]

Fatal or serious crushed-by hazards may exist where employees interact with dairy bulls and cows without appropriate training on dairy bull and cow behavior and/or work in areas where there is an increased likelihood of becoming caught between the animals and a fixed or moving structure such as a fence, corral, opening gate, crowd gate, etc.



1. Review your form 300 and Worker's Comp
 - What caused the injury?
 - Has hazard been repaired, replaced or removed?
2. Have you trained employees on safe animal handling practices? Do you have documentation of the training?
3. Warning signs – bulls in facilities?
4. Safety Policies and Procedures

Animal Areas: Bull Handling

- ▶ Post warning signs
- ▶ Restrict access
- ▶ Provide escape routes
- ▶ Use nose rings
- ▶ Remove aggressive bulls

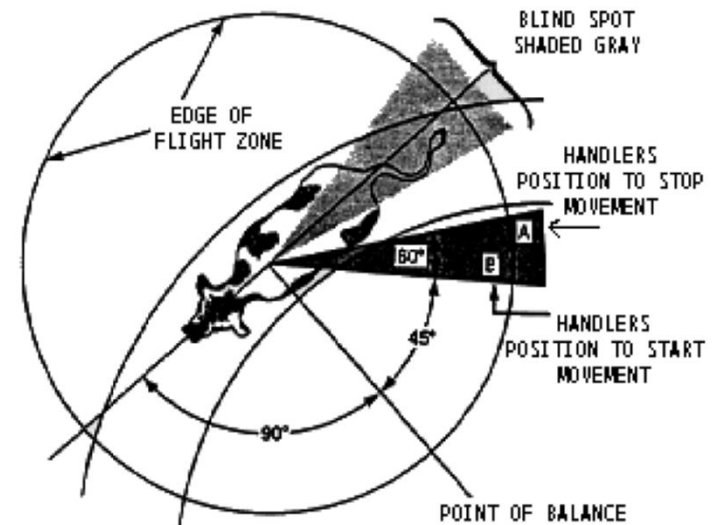


Animal Handling



Livestock Handling Guide

<http://goo.gl/8Q2Ux4>



CROWD GATE



Typical crowd gate “pushes” cows in parlor!



COWA

3. Electrical Systems [Section 5(a)(1)]

Electrocution and electrical shock hazards may exist where employees interact either:

- 1) making **direct contact** with improperly installed, improperly maintained, or damaged electrical systems on equipment such as disconnects, switches, circuit-breakers, pumps, fans, augers, fences, etc.; or
- 2) making **indirect contact** with overhead or buried power lines with farm equipment such as tractors, skid steers implements, portable augers, grain probes, ladders, poles, rods, irrigation pipes, etc.

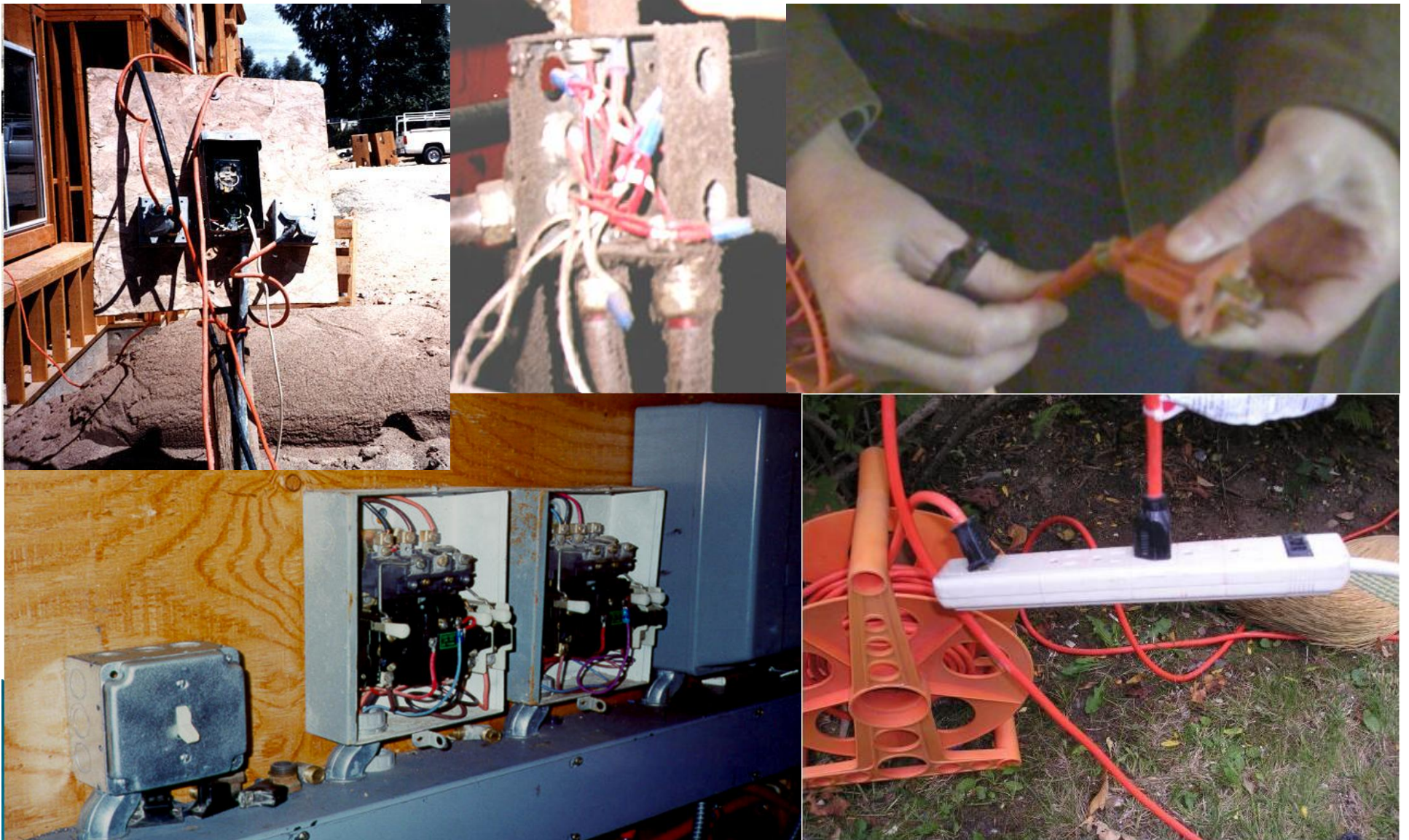
1. Where are the electrical hazards?
 - Power cords – frayed, cuts
 - Wiring – temporary wiring
 - Circuit breakers used as main switches
2. Lockout/Tagout procedures

Electrical

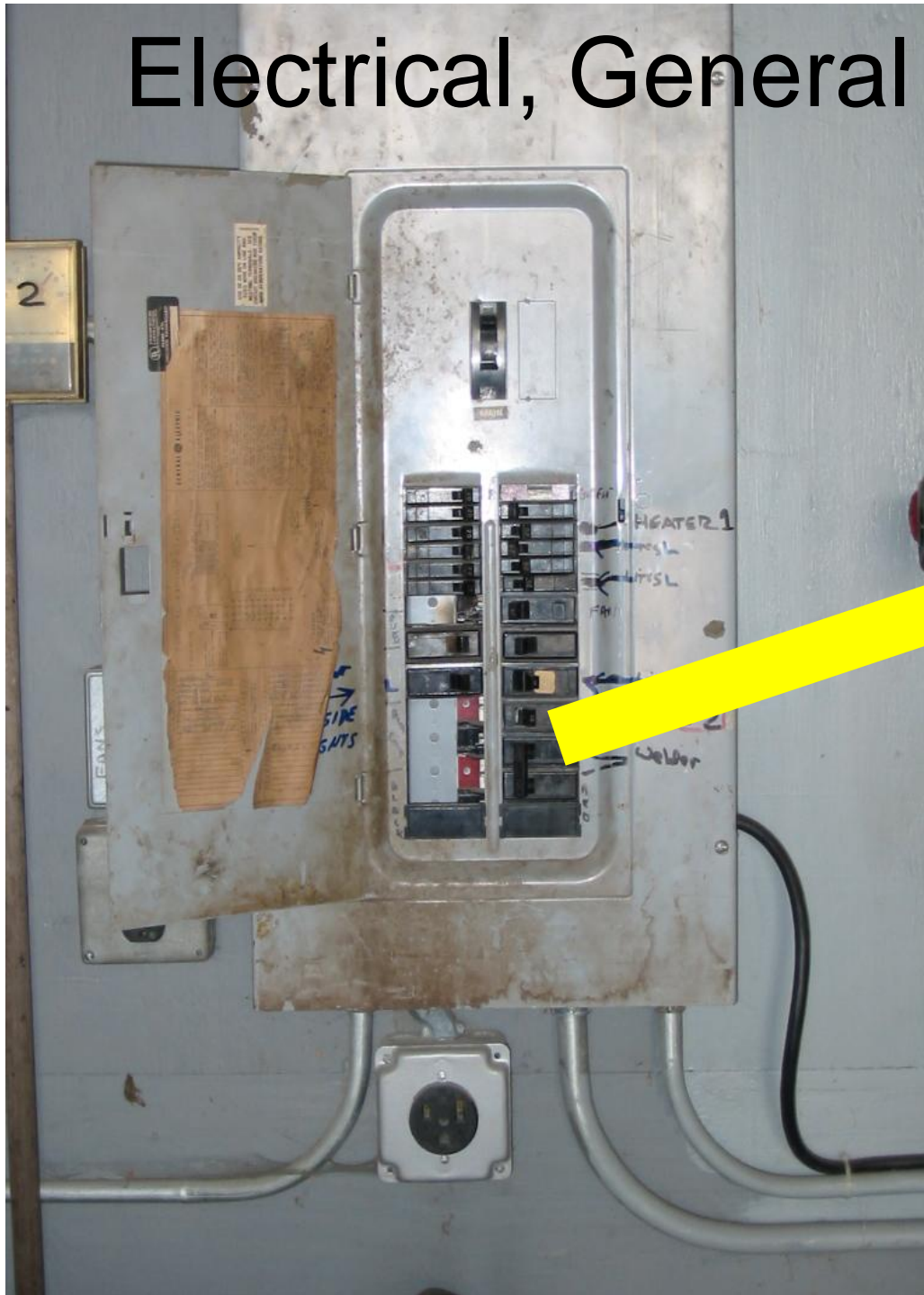
- ▶ Overhead: Pulling Implements
- ▶ Electrical Contact with Live Parts
- ▶ Fire: Faulty Electrical
- ▶ Explosion
- ▶ Issues
 - Missing Knockouts
 - Open Boxes
 - Animal Damage



Wiring Design and Protection



Electrical, General Requirements



4. Skid-Steer Loader [Section 5(a)(1)]

Fatal or serious crushed-by, struck-by, caught in-between, rollover hazards may exist where employees are:

1. **improperly trained** on operating, servicing, or maintaining skid-steer loaders according to the **manufacturer's** instructions;
2. **failure to use** approved lift arm support devices when servicing or maintaining the skid-steer loader; and
3. **intentional bypassing** of safety features of the skid-steer loader such as back-up alarms, seat belts, and control interlock systems.



Powered Industrial Vehicle

- No 1928 standard

1910.178: Powered Industrial Trucks Forklifts: Skid Steers [Section 5(a)(1)]

- ▶ Operator Training
 - Capacity / Stability / Operator Inspections
 - Workplace Topics / Surface Conditions
 - Refresher Training
- ▶ Evaluation of Performance
 - At Least Every Three Years
- ▶ Written Certification



5. Tractor Operation

Fatal or serious fall, struck-by, caught in-between, and/or rollover hazards may exist where employees are improperly trained on operating, servicing, or maintaining tractors.

NOTE: Doesn't require training to be documented.

Best practice:

Document or it didn't happen!

29 CFR 1928.51(b)(1)

Roll-over protective structures (ROPS).

ROPS shall be provided by the employer for each tractor operated by an employee.

NOTE: Manufactured after October 1976

1928.51(b)(2) Seatbelts

1928.51(b)(2)(i)(B) Ensure that each employee **tightens the seatbelt sufficiently** to confine the employee to the protected area provided by the ROPS.

29 CFR 1928.51(d) Operating instructions.

Every employee who operates an agricultural tractor shall be informed of the operating practices contained in Appendix A of this part and of any other practices dictated by the work environment. Such information shall be provided at the **time of initial assignment** and at **least annually** thereafter.

Employee Operating Instructions 1928

Subpart C App A

1. Securely fasten your seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available.



Employee training



- Recognizing hazards
- Batteries
- Hydraulics
- Machine Guarding

NYS Rollover Protective Structure (ROPS) Retrofit Program

New York has developed a ROPS Retrofit Program that will rebate 70% of the cost of purchasing and installing the ROPS (Rollover Protective Structure) up to \$865 maximum rebate. This includes the cost of the ROPS (rollbar, ROPS with Awning or ROPS cab), shipping, and installation charges. promote safety.

New York Center for Agricultural Medicine and Health

<http://goo.gl/R5yDp0>



6. Guarding of Power Take-Offs (PTO)

Fatal or serious entanglement or amputation hazards may exist where power take-off shafts and other related components on farm field and farmstead equipment are not properly guarded.



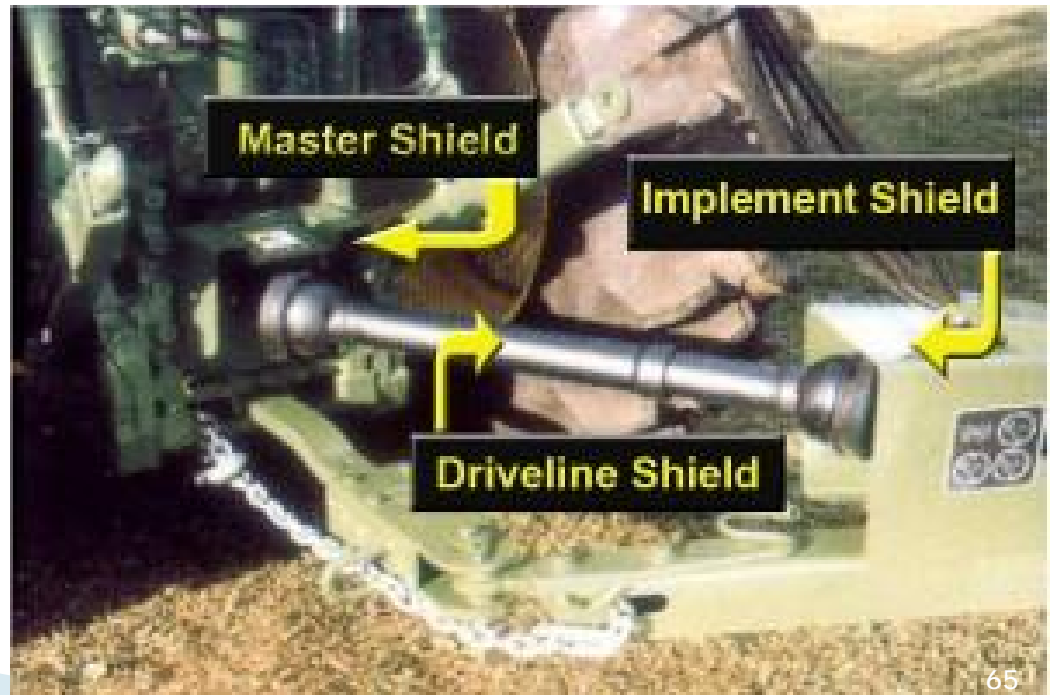
Farm field equipment:
*29 CFR 1928.57(b)(1)(i) through (iii)*¹¹

1928.57(a)(6) Operating instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all covered equipment with which he is or will be involved, including at least the following safe operating practices:

Farmstead equipment:
*29 CFR 1928.57(c)(1)(i) and (ii)*⁷.

Power Take OFFS (PTO)

- ▶ Most incidences involve clothing becoming caught
- ▶ PTO at 540 rpm travels 2 yards per second



PTO Shafts



Power Take-Off (PTO) Shield Retrofit Kits

New York Center for Agriculture Medicine And Health has developed a PTO Retrofit Program to replace damaged or missing PTO shields.

<http://goo.gl/R4T4n1>



7. Guarding of other power transmission and functional components

Fatal or serious entanglement or amputation hazards may exist where other power transmission components on farm field and farmstead equipment are not properly guarded.

- Augers and Conveyors
- Barn scraper
- Ventilation Fans
- TMR mixers

Farm field equipment:

29 CFR 1928.57(b)(2)(i) through (iii)

29 CFR 1928.57(b)(3)

29 CFR 1928.57(b)(4)(i) and (ii)

Farmstead equipment:

29 CFR 1928.57(c)(2)(i) and (ii)

29 CFR 1928.57(c)(3)(i) through (iii)

29 CFR 1928.57(c)(4)(ii)

Farmstead equipment

- ▶ Augers



- Scraper



- ▶ Sweep arm mechanisms



Machine Guarding: 1928.57



8. Hazardous energy control while performing servicing and maintenance on equipment [Section 5(a)(1)]

Fatal or serious crushed-by, struck-by, caught in between, entanglement, or amputation hazards may exist where employees perform maintenance and servicing on farm field, farmstead, or other equipment without a means of immediate and exclusive control of hazardous energy sources by the employee or the employees maintaining or servicing equipment.

Guidance documents

- Manufacturer's manual and instructions
- AEM Safety Manuals for tractors and skid steers, wheel loaders

Consider:

- How to lockout?
- Stored energy – e.g hydraulics
- Right tool for the job
- Lone worker



1910.147: Control of Hazardous Energy Lockout-Tagout [Section 5(a)(1)]

- ▶ Written LOTO Procedures
 - Some equipment is exempt
- ▶ Individual Employee Protection (Locks)
- ▶ Shift Change & Authorized Lock Removal
- ▶ Annual Audit



9. Hazard Communication

Serious **chemical ingestion, absorption, splash, fire, or other hazards** may exist where hazardous chemicals such as teat dips, hoof care products, sanitization products, etc. are stored, dispensed, and used **without appropriate training and information** including the availability of Safety Data Sheets (SDSs).

1928.21(a)(5) Hazard Communication – 1910.1200

1910.1200(a)(1)

The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.



Hazard Communication

Comprehensive hazard communication program

- Written plan
- What's the hazard and the exposure to the hazard?
- PPE (Personal Protective Equipment)
- Are SDS available? Keep SDS for 30 years
- New hazard introduced – training (inform of hazard)

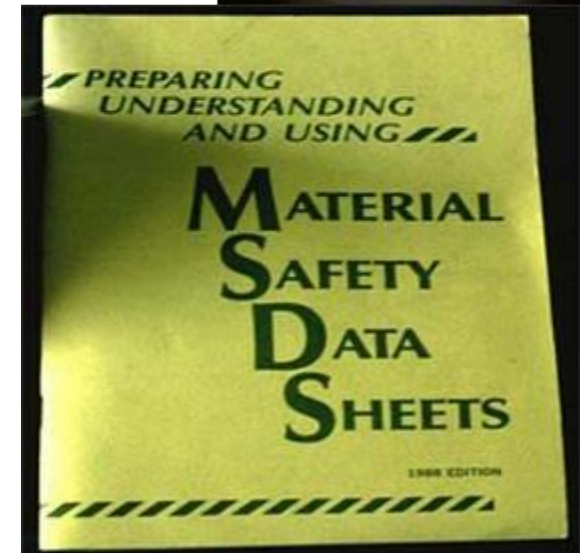


What's in
your
footbath?

1910.1200

Hazard Communication

- ▶ Safety Data Sheets
 - Hazards of Chemical (Flammable, corrosive, toxic, etc.)
 - Personal Protective Equipment
- ▶ Labeling
 - Specific Chemicals
 - Types of Chemical Hazards
- ▶ Training
- ▶ Written Program





Emergency Flushing Stations



Eye Wash/Shower

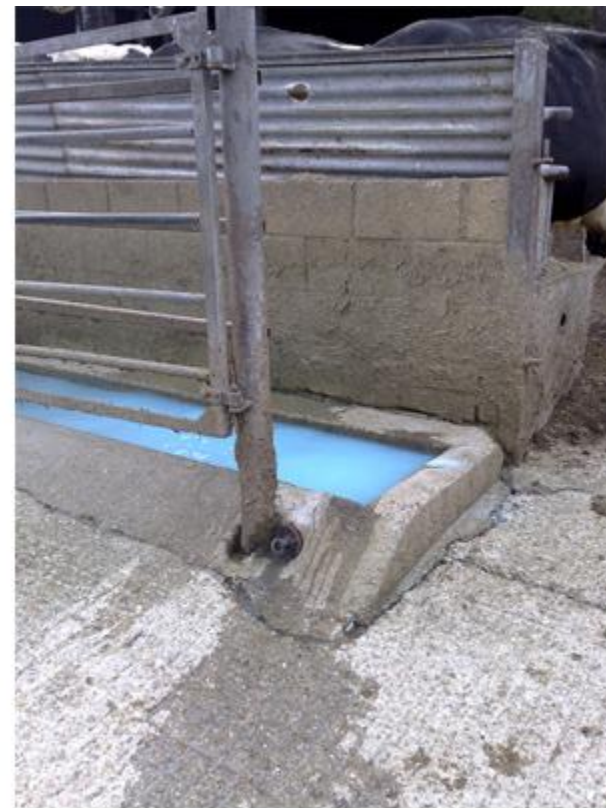
- Is material corrosive? (causes tissue destruction, check pH)
- Required to have an eyewash?
- 15 minutes of continuous flow?
- Body exposure for shower?
- PPE used?
- Maintenance & testing?
- Heat traced for freezing areas?
- Located near hazard?



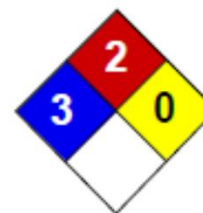
► Gravity Fed Eyewashes and Personal Eyewash Bottles

- Bacteria build up (need for biocide)
- Dirt accumulates on top
- Contaminates eye during use
- Seal broken: Less than full





Effectiveness: Multi-Purpose
Health Hazards for Cow and Employee
Pre-mixed vs. Powder Form
Cost Effective
(Formaldehyde on List of Human Carcinogens)



Health	3
Fire	2
Reactivity	0
Personal Protection	G

Material Safety Data Sheet
Formaldehyde 37% solution MSDS



Hoof Dip

- ▶ Formaldehyde
- ▶ Copper Sulfate
- ▶ Hydrogen Peroxide acid mixture



Health	3
Fire	2
Reactivity	0
Personal Protection	G

Material Safety Data Sheet Formaldehyde 37% solution MSDS

Section 1: Chemical Product and Company Identification	
Product Name: Formaldehyde 37% solution Catalog Code: SLF1426 CAS#: Mixture. RTECS: LP8925000 TSCA: TSCA 8(b) Inventory: Formaldehyde; Methyl alcohol; Water CI#: Not applicable. Synonym: Formalin Chemical Name: Formaldehyde Chemical Formula: HCHO	Contact Information: Sciencelab.com, Inc. 14025 Smith Rd. Houston, Texas 77396 US Sales: 1-800-901-7247 International Sales: 1-281-441-4400 Order Online: ScienceLab.com CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300 International CHEMTREC, call: 1-703-527-3887 For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients		
Composition:		
Name	CAS #	% by Weight
Formaldehyde	50-00-0	36.5-38
Methyl alcohol	67-56-1	10-15
Water	7732-18-5	47-53.5
Toxicological Data on Ingredients: Formaldehyde: ORAL (LD50): Acute: 100 mg/kg [Rat], 42 mg/kg [Mouse], 260 mg/kg [Guinea pig], MIST (LC50): Acute: 454000 mg/m 4 hours [Mouse], Methyl alcohol: ORAL (LD50): Acute: 5628 mg/kg [Rat], DERMAL (LD50): Acute: 15800 mg/kg [Rabbit], VAPOR (LC50): Acute: 64000 ppm 4 hours [Rat].		

Potential Chronic Health Effects:

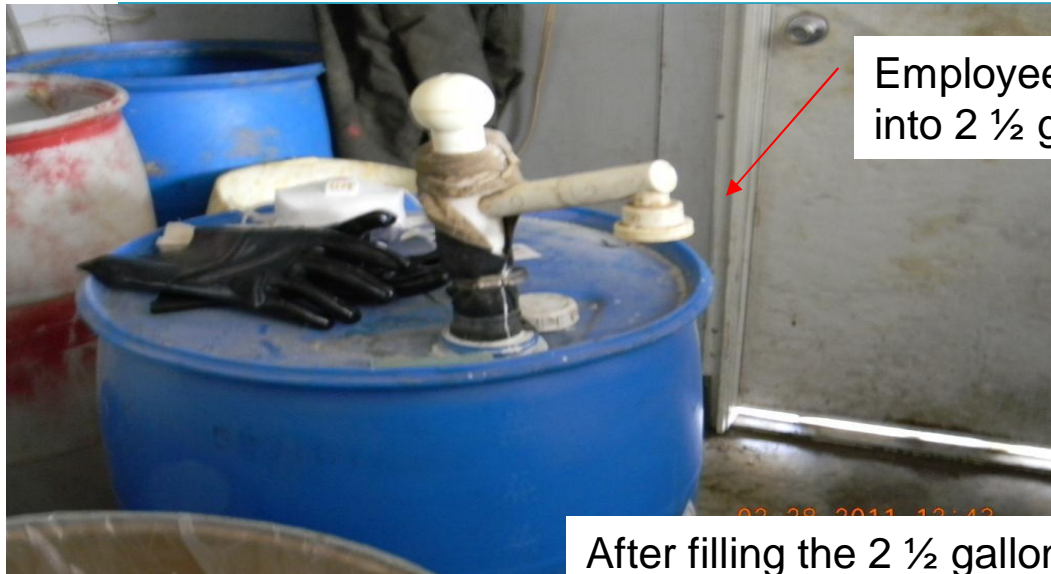
Hazardous in case of skin contact (sensitizer). **CARCINOGENIC EFFECTS:** Classified A2 (Suspected for human.)



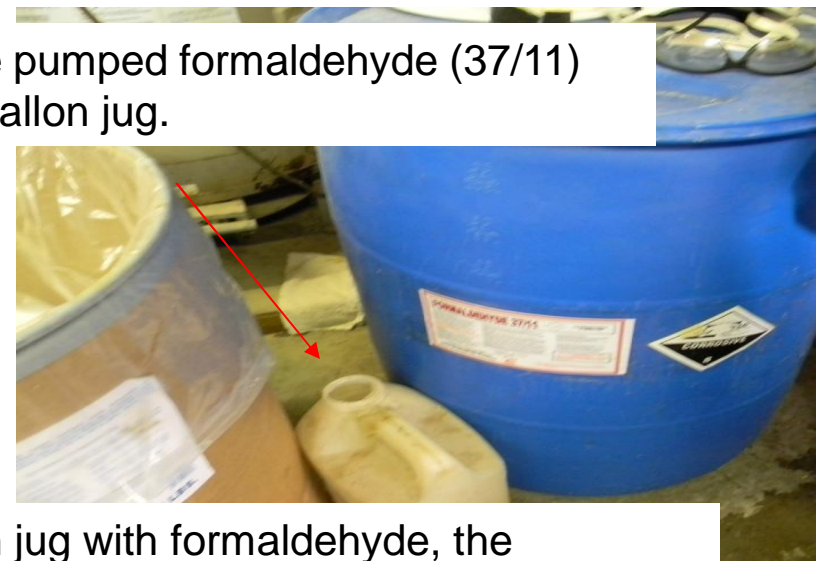
Potential Acute Health Effects:

Very hazardous in case of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (irritant, sensitizer, permeator), of eye contact (corrosive). Slightly hazardous in case of skin contact (corrosive). Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

Formaldehyde Exposure



Employee pumped formaldehyde (37/11) into 2 ½ gallon jug.



After filling the 2 ½ gallon jug with formaldehyde, the employee poured the chemical into two separate troughs filled with water for the foot bath.



02.28.2011 12:09



02.28.2011 12:09

Formaldehyde Exposure

Employee	Operation	Contaminant	Exposure	OSHA Standard	ACGIH Standard
XXX	Employee hand pumped formaldehyde (37/11, 37 % formaldehyde/ 11% methanol) from a 55 gallon drum to a 2 ½ gallon jug, and then poured the mixture into two separate troughs filled with water for the foot bath.	Formaldehyde	<u>Sample #1</u> 2.235 ppm @ 10 minutes 1.490 ppm @ 15 minutes <u>Sample #2</u> 1.485 ppm @ 12 minutes 1.188 ppm @ 15 minutes <u>Sample #3</u> 1.557 ppm @ 12 minutes 1.245 ppm @ 15 minutes	2 ppm (STEL) 2 ppm (STEL) 2 ppm (STEL)	0.3 ppm (Ceiling) 0.3 ppm (Ceiling) 0.3 ppm (Ceiling)



- By December 1, 2013, employers must train employees on the new label elements and SDS format
e.g., new pictograms
- Chemical Manufacturers & Importers
Must distribute safety data sheets by 6-1-2015
- Distributors of Chemicals
Must ship & deplete old stock by 12-1-2015

Everyone must be in compliance with all provisions of the revised hazard communication standard by June 1, 2016



10. Confined Spaces [Section 5(a)(1)]

Confined Spaces:

Serious or fatal chemical asphyxiation, oxygen (O₂) deficiency, inhalation, engulfment, or caught-in hazards may exist where there is entry into grain storage bins, vertical silos, hoppers, manure storage vessels, milk vessels, below grade manure collection systems, etc.



Guidance document:

ANSI/ASSE Z117.1-2009: Safety Requirements for Confined Spaces

- Multi-Employer Worksite Citation Policy
- Evaluate the confined space
- Have their employees been trained for your confined spaces
- Evaluate the confined space
- Policy
 - Authorized Personnel Only
 - Do Not Enter
- Signage = Warning

Conventional Vertical Silos

Access, Entry, Gases, Moving Parts, Electrical, Fires, etc.

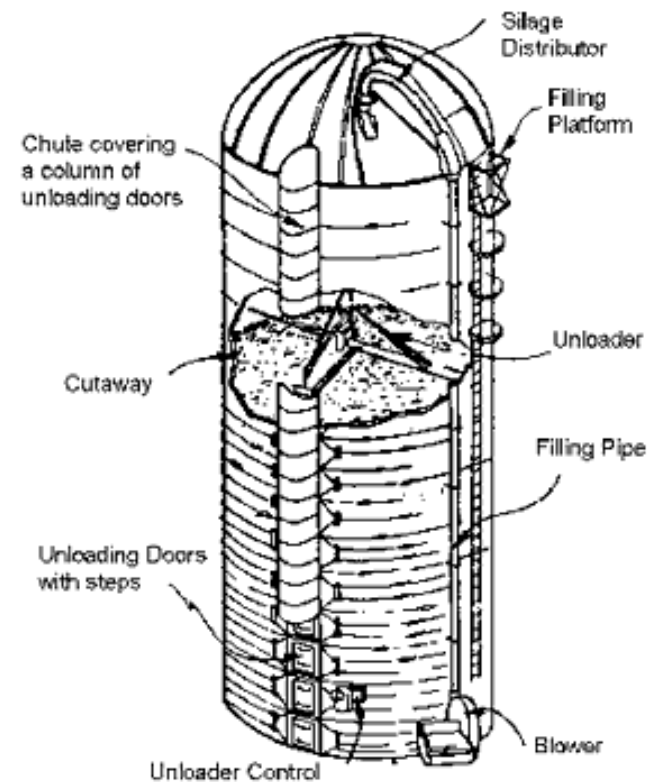


Figure 2. A typical top-unloading or conventional silo

1910.146 or 1910.272: Permit Required Confined Spaces [Section 5(a)(1)]

- ▶ Identify all permit-required confined spaces in the workplace
- ▶ Prohibit unauthorized entry
- ▶ Develop written program
- ▶ Establish entry procedures
 - Written entry permit
 - Alternate procedures
 - Ability to reclassify space to "Non-Permit Required"
- ▶ Annual Audit



11. Horizontal Bunker Silos [Section 5(a)(1)]

Serious or fatal **engulfment or struck-by hazards** may exist where employees perform **'facing'** activities when removing silage from ground level. Serious or fatal **fall hazards** may exist where employees climb on top of the silage to place or remove protective plastic covering and anchoring systems.

????

**How do you
provide fall
protection on a
horizontal silo?**

Horizontal Bunkers

- ▶ Wall Collapse
- ▶ Avalanches
- ▶ Fall Protection While (Un)Covering
- ▶ Struck-by Vehicles
- ▶ Roll-Overs when compacting



Horizontal Feed Bunkers Fall & Avalanche Potential



Bale Storage & Handling



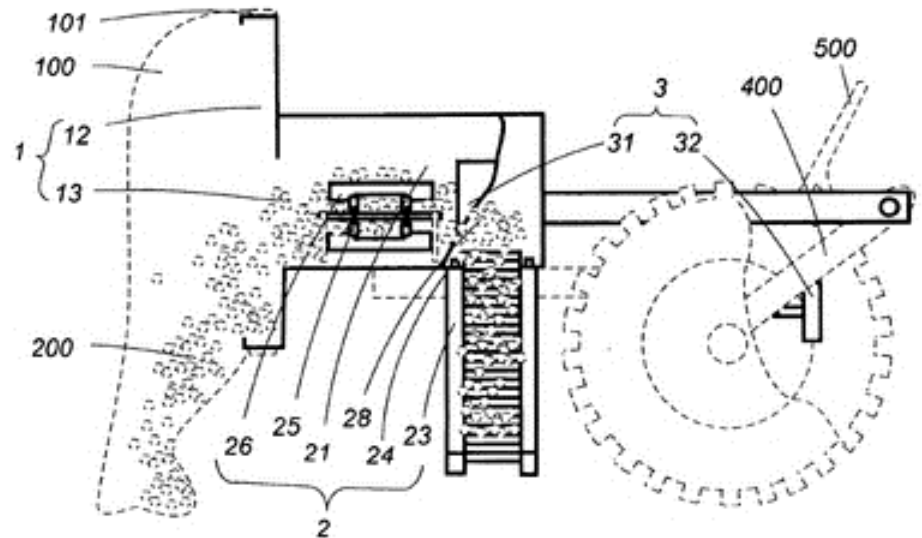
Storage Best Practice

Eliminates Foot Traffic & Protected from the Elements



Silos/Silo Bags

- ▶ Gas
- ▶ Confined Space Entry
- ▶ Over Stepping PTO
- ▶ Permit Required Confined Space
- ▶ Lockout/Tagout



12. Noise [Section 5(a)(1)]

Serious hearing loss hazards may exist when working with or around running agricultural equipment.

Noise monitoring or measuring must be conducted when exposures are at or above 85 dB.

Guidance Documents

Penn State College of Agricultural Sciences Cooperative Extension: "Noise Induced Hearing Loss in Agriculture, E48" (2007)

American Conference of Government Industrial Hygienists (ACGIH) Publication #0111: "2011 TLVs and BEIs (2011)"

Farm Equipment Safety



- ✓ Training
- ✓ ROPS and seatbelts
- ✓ PTO
- ✓ Other guards



Personal Protective Equipment (PPE): [Section 5(a)(1)]

- ▶ **1910.132 – Hazard Assessment**

- Required PPE
- Written Certification
- Training

- ▶ **Specific Requirements**

- ▶ **1910.133 – Eye / Face**
- ▶ **1910.135 – Head**
- ▶ **1910.137 – Electrical**
- ▶ **1910.95 – Noise**



1910.134 – Respiratory

1910.136 – Foot

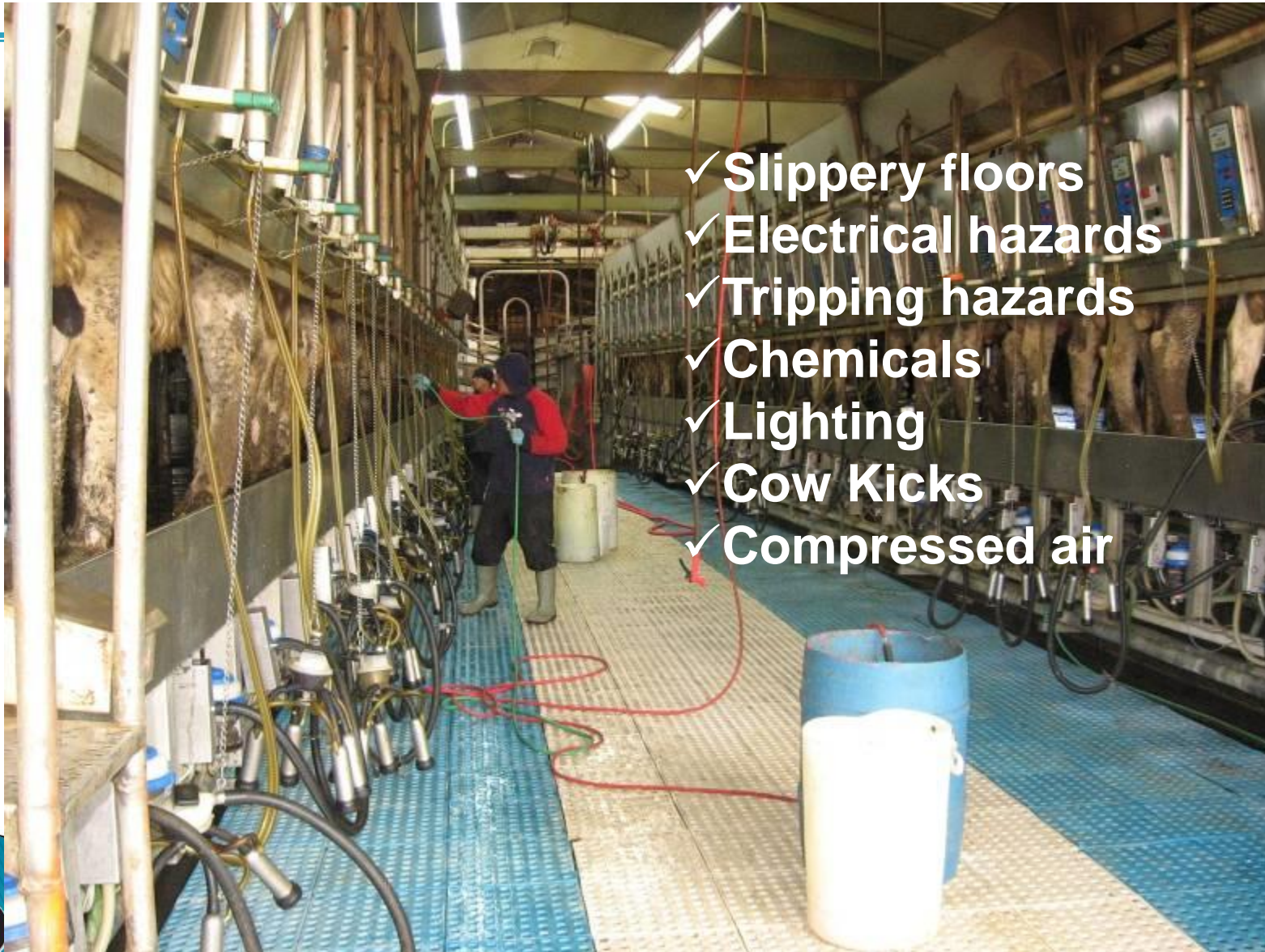
1910.138 – Hand

Veterinarian issues

- ▶ Personnel protective equipment (PPE)
- ▶ Safety Data Sheets (SDS's)
- ▶ Labeling of Drugs



Milking Room Hazards



- ✓ Slippery floors
- ✓ Electrical hazards
- ✓ Tripping hazards
- ✓ Chemicals
- ✓ Lighting
- ✓ Cow Kicks
- ✓ Compressed air



What are you doing in your Machine Shops/Shed?

- ▶ Vehicle and machinery repair
 - Elevated/blocked machinery
 - Compressed gases/air
 - Welding
 - Cutting
 - Grinding
 - Electrical
 - Storage



OSHA Resources

➤ OSHA

➤ www.osha.gov

➤ 1-800-321-osha (6742)

➤ Consultation Programs

➤ New York: NYS Department of Labor/OSHA

➤ Syracuse, (315-479-3350), Keith Gillette,
Gillette.Keith@dol.gov

➤ Buffalo, (716-847-7166), Greg Conrad,
Conrad.Greg@dol.gov

➤ Albany, (518-457-2810), Bob Francis,
Francis.Bob@dol.gov

➤ www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_ONSITE_Consultation.shtm



Questions





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