# OSHA's Top Ten Most Cited

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# Safety Takeways

## Safety Takeaways

- Watch for common issues!
- Watch your staff & contractors
- Management of change
  - Safety Data Sheets

# Wake Up! Quiz Time!

- **The most frequent injuries in water treatment facilities are:**
  a. Cuts and bruises
  b. Explosive and toxic gases
  c. Slips and falls
  d. Strains and Sprains
  e. None of the above

# OSHA's Top Ten Most Cited

## OSHA's 2015 TOP TEN
## Most Frequently Cited Violations

1. 1926.501 – Fall Protection (C)
2. 1910.1200 – Hazard Communication
3. 1926.451 – Scaffolding (C)
4. 1910.134 – Respiratory Protection
5. 1910.147 – Lockout/Tagout
6. 1910.178 – Powered Industrial Trucks
7. 1926.1053 – Ladders (C)
8. 1910.305 – Electrical, Wiring Methods
9. 1910.212 – Machine Guarding
10. 1910.303 – Electrical, General Requirements

(C) = Construction standard

## OSHA's 2014 TOP TEN
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1. Fall protection (C)
2. Hazard communication
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4. Respiratory protection
5. Powered industrial trucks
6. Lockout/tagout
7. Ladders (C)
8. Electrical: wiring
9. Machine guarding
10. Electrical: systems design

C = Construction standard

# OSHA's Top Ten Most Cited

## #10 Electrical – Systems Design

- Electrical design
- Arc Flash (NFPA 70E) System specific evaluations
  - Proposed equipment
  - Existing equipment
- PPE

**WARNING**

**Arc Flash and Shock Hazard**

**Appropriate PPE Required**

| | |
|---|---|
| 13 in | Flash Hazard Boundary |
| 0.67 cal/cm^2 | Flash Hazard at 18 in |
| Category 0 | Nonmelting or Untreated Fiber with Weight >= 4.5 oz/sq yd |
| 208 VAC | Shock Hazard when cover is removed |
| 00 | Glove Class |
| 42 in | Limited Approach |
| Avoid Contact | Restricted Approach |
| Avoid Contact | Prohibited Approach |

**Location: 400A Busway #1 DS**

**WARNING**

**Arc Flash and Shock Hazard**

**Appropriate PPE Required**

| | |
|---|---|
| 4 in | Flash Hazard Boundary |
| 0.09 cal/cm^2 | Flash Hazard at 18 in |
| Category 0 | Nonmelting or Untreated Fiber with Weight >= 4.5 oz/sq yd |
| 208 VAC | Shock Hazard when cover is removed |
| 00 | Glove Class |
| 42 in | Limited Approach |
| Avoid Contact | Restricted Approach |
| Avoid Contact | Prohibited Approach |

**Location: AH QA left**

**WARNING**

**Arc Flash and Shock Hazard**

**Appropriate PPE Required**

| | |
|---|---|
| 16 in | Flash Hazard Boundary |
| 0.95 cal/cm^2 | Flash Hazard at 18 in |
| Category 0 | Nonmelting or Untreated Fiber with Weight >= 4.5 oz/sq yd |
| 208 VAC | Shock Hazard when cover is removed |
| 00 | Glove Class |
| 42 in | Limited Approach |
| Avoid Contact | Restricted Approach |
| Avoid Contact | Prohibited Approach |

**Location: 400A Busway #2**

**WARNING**

**Arc Flash and Shock Hazard**

**Appropriate PPE Required**

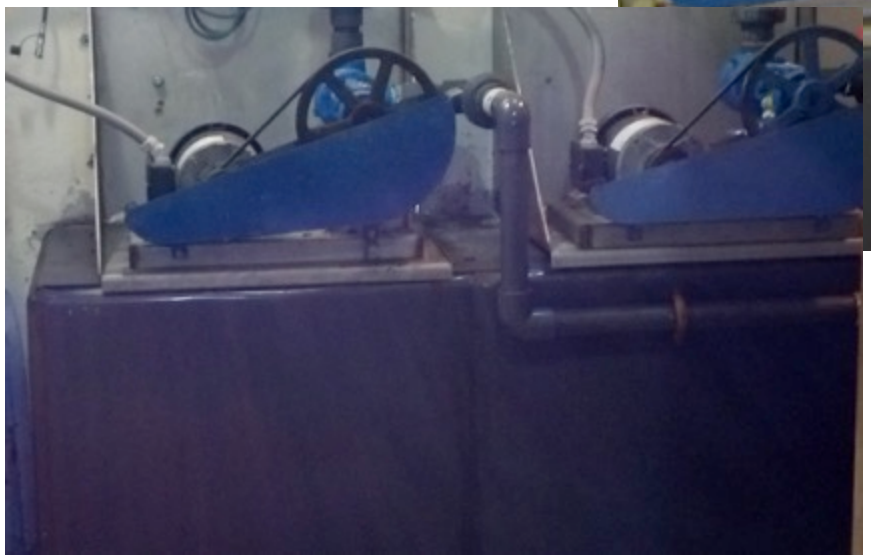
| | |
|---|---|
| 15 in | Flash Hazard Boundary |
| 0.88 cal/cm^2 | Flash Hazard at 18 in |
| Category 0 | Nonmelting or Untreated Fiber with Weight >= 4.5 oz/sq yd |
| 208 VAC | Shock Hazard when cover is removed |
| 00 | Glove Class |
| 42 in | Limited Approach |
| Avoid Contact | Restricted Approach |
| Avoid Contact | Prohibited Approach |

**Location: AH QA left DS**

# OSHA's Top Ten Most Cited

## #9 Machine Guarding

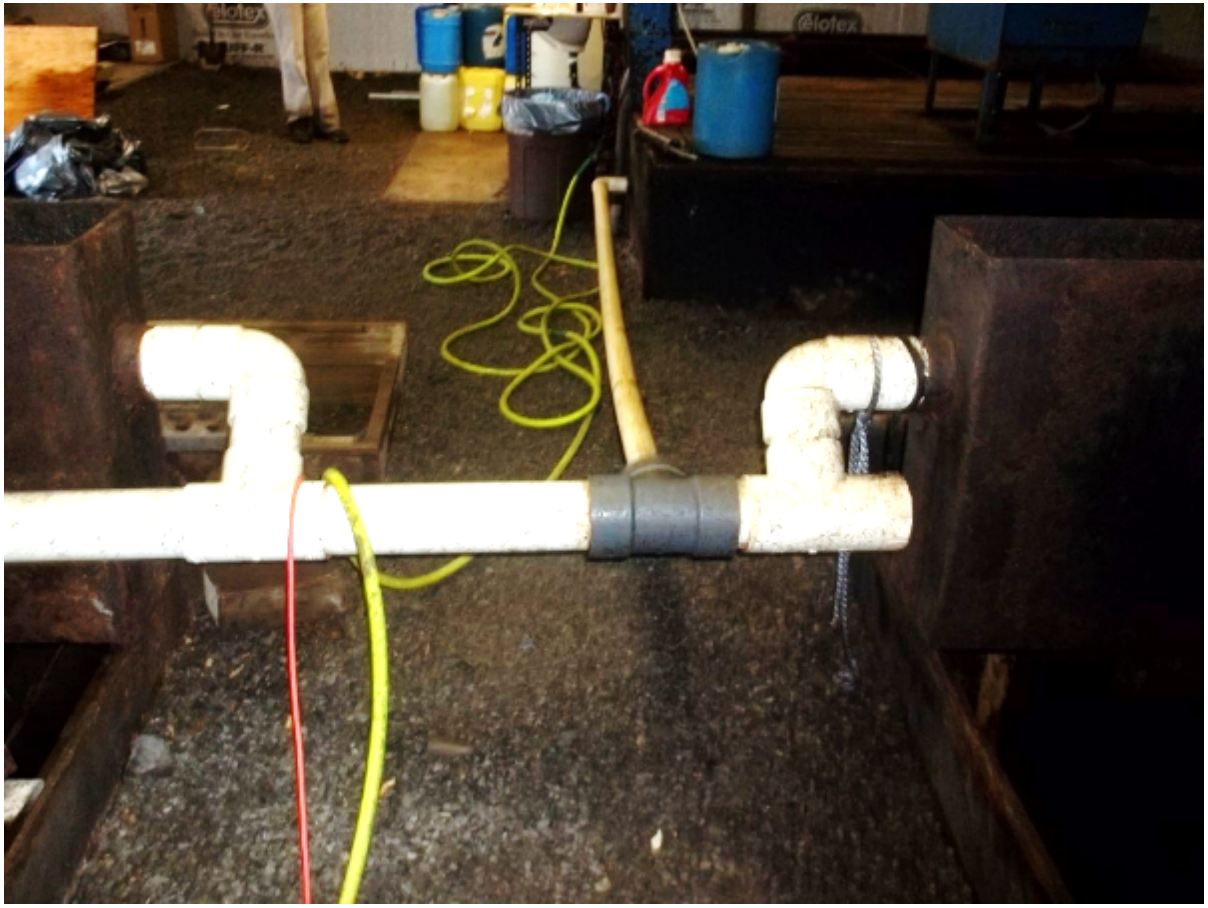
- Engineered or structural fixes
- Job Hazard Analysis (JHAs)



# OSHA's Top Ten Most Cited

## #8 Electrical - Wiring

- Permanent
- Temporary



# OSHA's Top Ten Most Cited

## #7 Ladders - CONSTRUCTION

- Design considerations
- Milestone Observation

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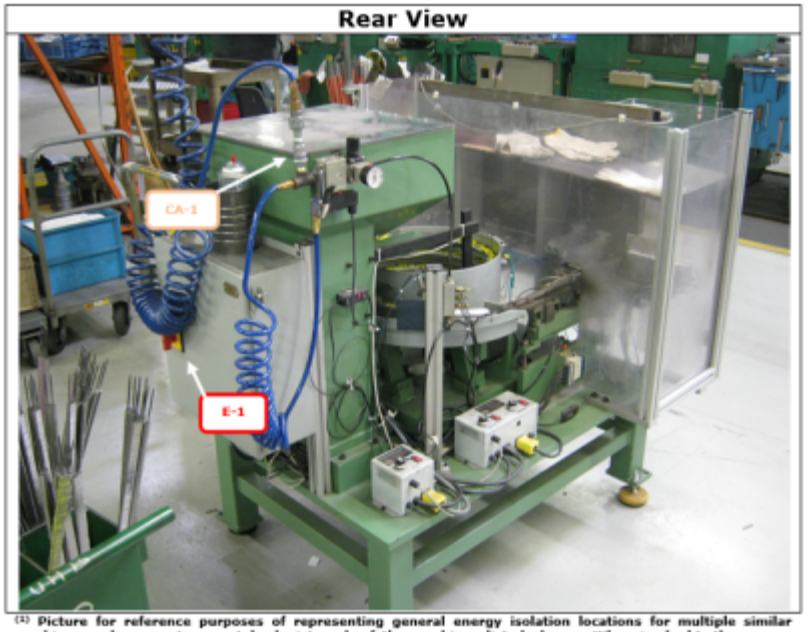
## #6 Lockout / Tagout

- System specific evaluation
- Comprehensive energy source understanding


(1) Picture for reference purposes of representing general energy isolation locations for multiple similar machines and may not accurately depict each of the machines listed above. When in doubt, the person performing the lockout should confirm the energy isolation device location and verify proper isolation using the steps in this procedure.

*** ALWAYS PERFORM A MACHINE STOP BEFORE LOCKING OUT DISCONNECTS ***

| ID | ENERGY SOURCE | HAZARD | STORED ENERGY | REQUIRED STEP | LOCKOUT DEVICE |
|---|---|---|---|---|---|
| | Kinetic Energy | Crushing | Allow moving parts to stop<br>**Verify** – Attempt to start machine | | See System Power below |
| E-1 | System Power | Electrocution<br>208 Volt | None | **Isolate** - Disconnect switch<br>**Verify** – Qualified person test system power for energized circuits | Lock, Tag |
| CA-1 | Compressed Air | Air Pressure<br>90 PSI | High Pressure | **Isolate** – Disconnect quick connect, relieve pressure at regulator<br>**Verify** – Check gauge for zero reading | Cover, Tag |

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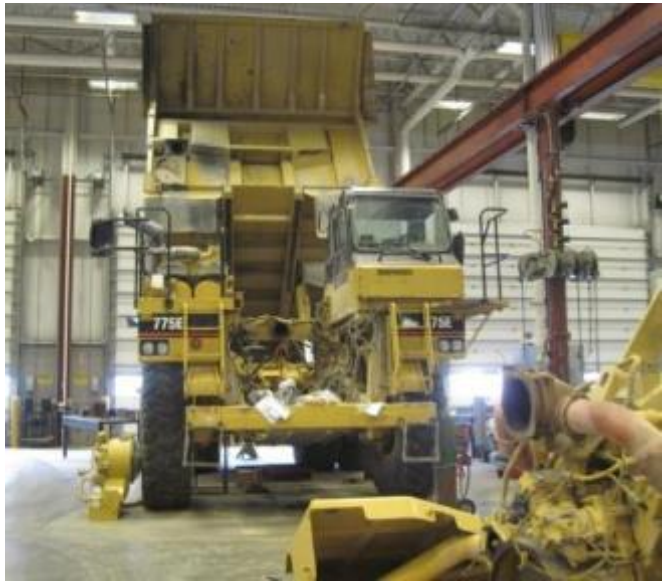
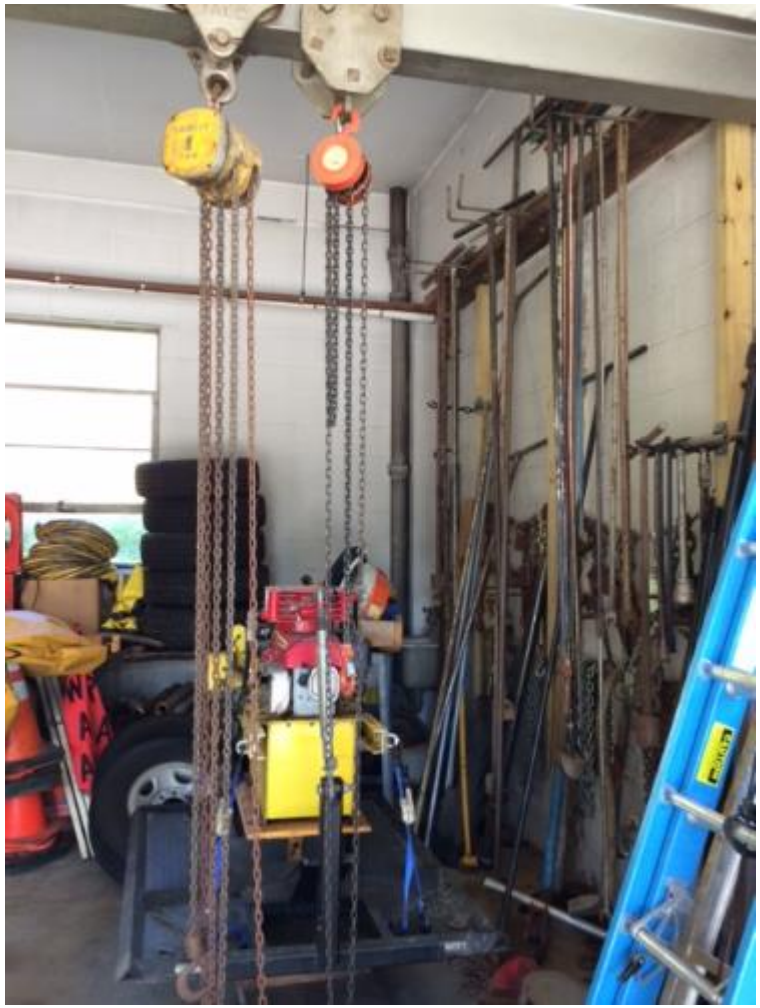
## #5 Powered Industrial Trucks

- PIVs
- Hoisting requirements





# OSHA's Top Ten Most Cited

## #4 Respiratory Protection

- Engineer out, if possible
- Written Plan
  - Baseline physical
  - Medical surveillance
  - Fit testing

# OSHA's Top Ten Most Cited

## #3 Scaffolding - CONSTRUCTION

- Design considerations
- Milestone Observation

# OSHA's Top Ten Most Cited

## #2 Hazard Communication


- Globally Harmonized System
- Risk Management Planning
  - Chlorine Gas = >2,500 Lbs

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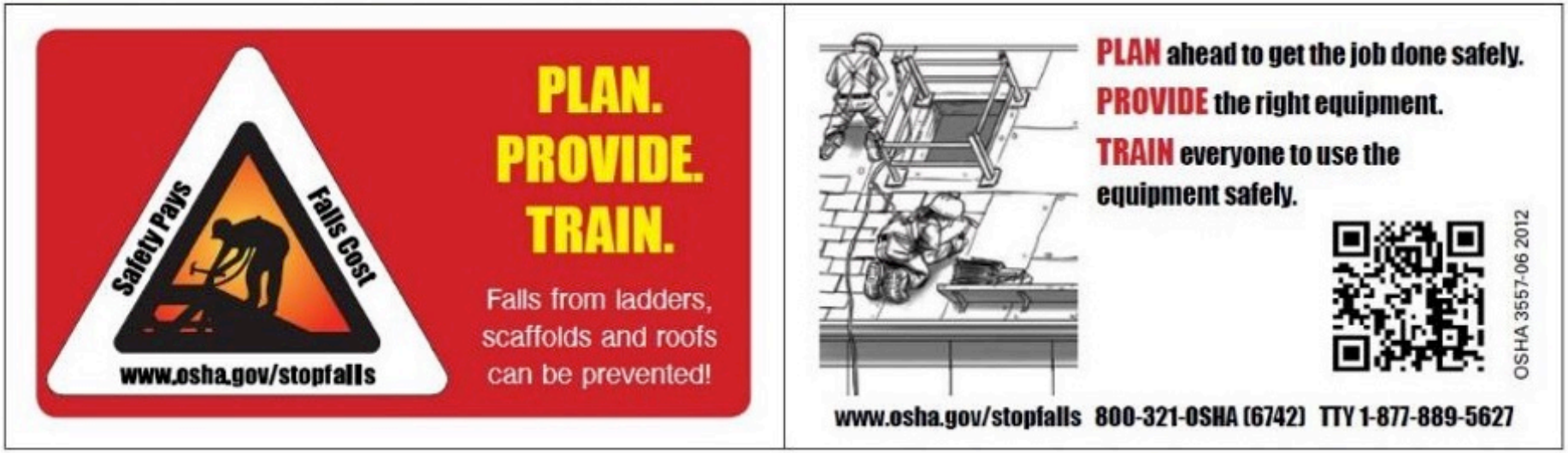
## #1 Fall Protection - CONSTRUCTION

- Design considerations
- Milestone Observation



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9. Machine guarding
10. Electrical: systems design

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# Wake Up! Another Quiz!

- **The most frequent safety hazard from the use of polymers is:**

A. Attack on many types of stainless steel

B. Cause of severe burns and blindness

C. Evolution of a toxic gas

D. Extreme slipping hazard when spilled on surfaces

E. The boss scrutinizing chemical costs

# Global Harmonization System

- The goal of GHS
- Label elements and GHS pictograms
- Labeling components
- Training
- Possible sources of confusion


# GHS from OSHA

# Global Harmonization System

| Effective Completion Date | Requirement(s) | Who |
|---|---|---|
| December 1, 2013 | Training<br>•New Label Elements<br>•Safety Data Sheets | Employers |
| June 1, 2015 | Manufacturer full compliance<br>HAZCOM plans updated | Chemical Manufacturers<br>Employers |
| December 1, 2015 | Distribution Prohibitions for non GHS labels | Chemical Manufacturers, Importers and Distributors |
| June 1, 2016 | Updates to program and training based on new hazard classifications | Employers |

# Conclusion

- **HAZCOM is GHS**
- **Broad applicability – everybody is "in"**
- **Lots to do**
  - Training on GHS elements
  - Plans and programs need to be revised
  - SDS need to be developed
  - New labels need to be designed and implemented

# Safety Takeaways

- **Watch for common issues!**
- **Watch your staff & contractors**
- **Management of change**
  - Safety Data Sheets

# Thank You!!


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