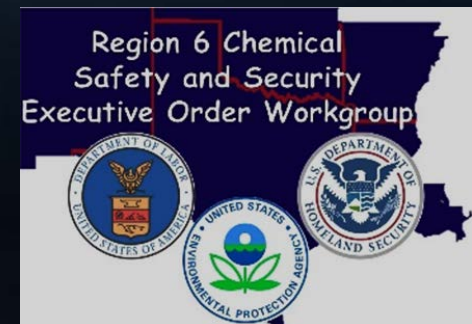


# OSHA Briefing to Regional States LEPCs

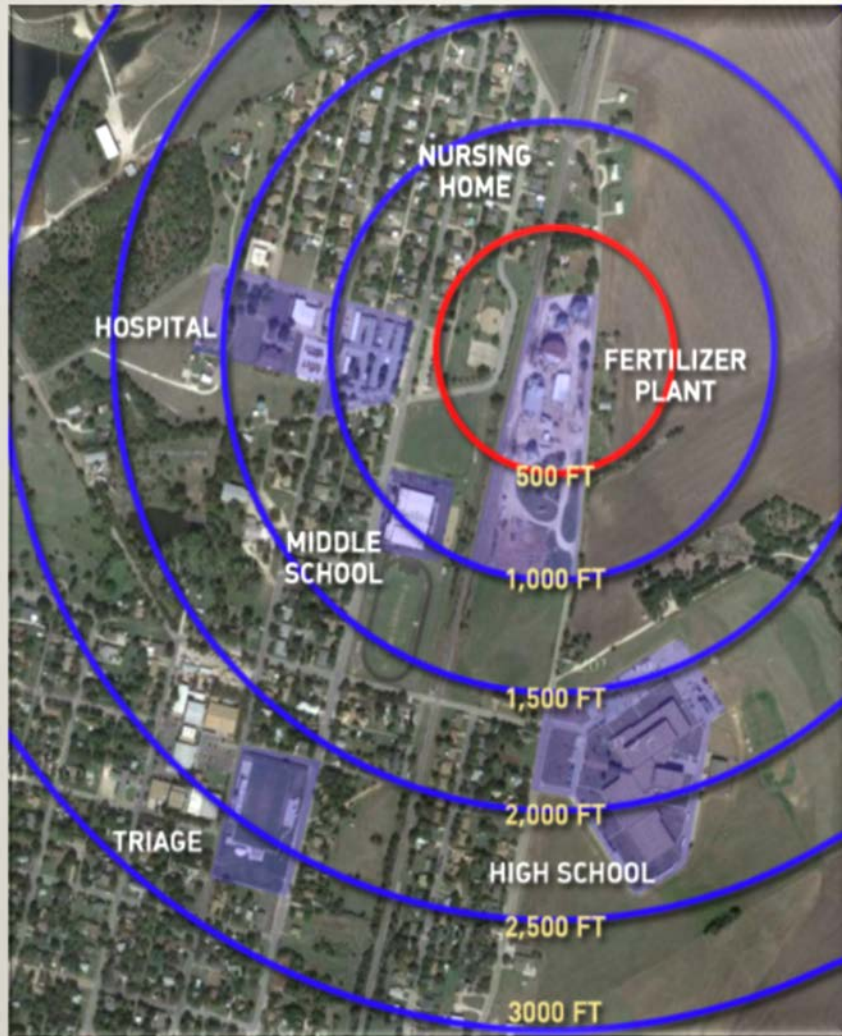
**Howard Cole**  
OSHA Region VI



# West Fertilizer Company History

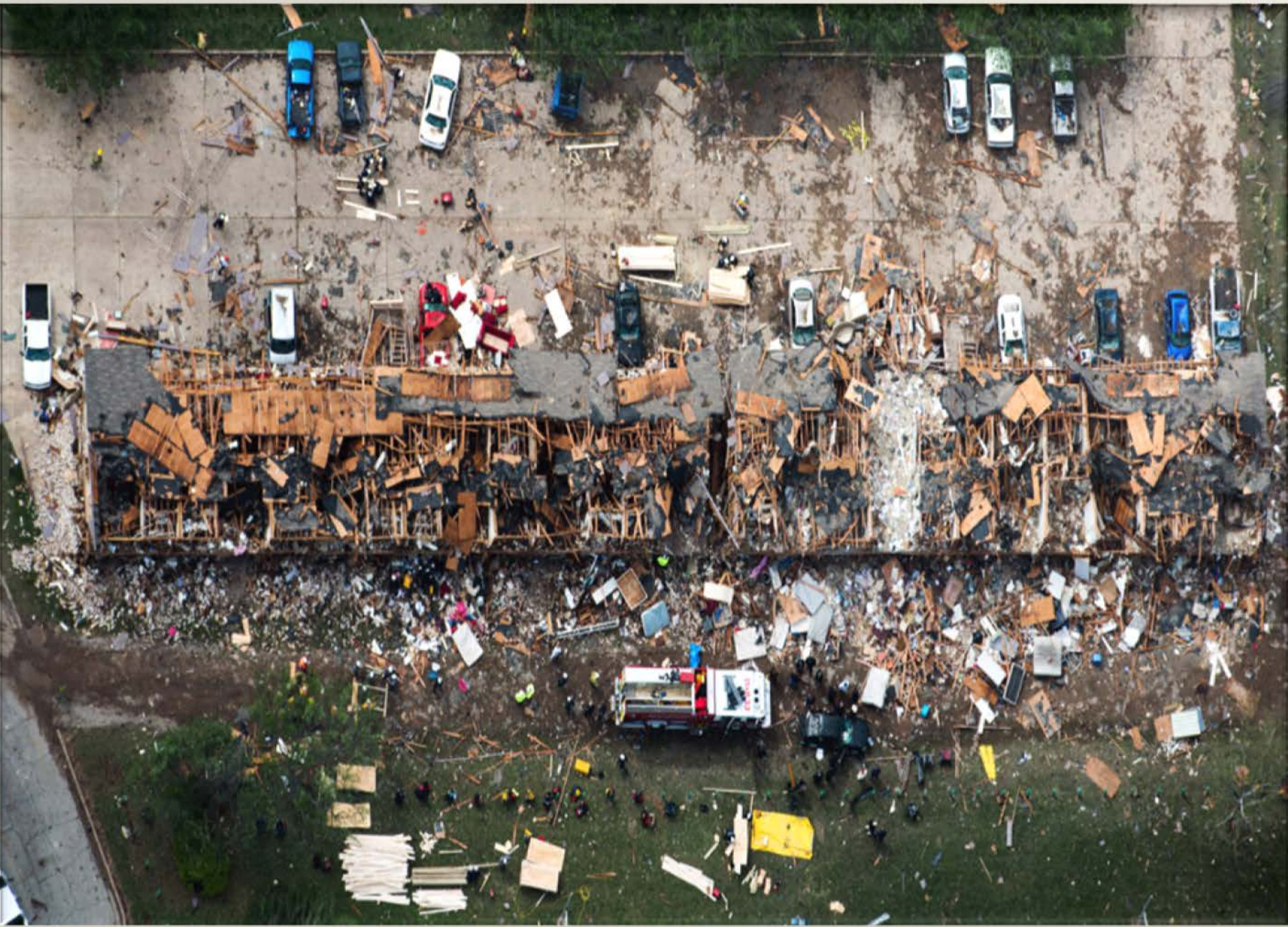
- Established, 1958, for grain/feed storage and supply.
- Fertilizer storage began in 1962. Monsanto built building to hold 600 tons of fertilizer. Additional building added in 1967.
- Purchased in 2004 by West Fertilizer Company and stored, brokered and sold grain from the field.
- AN and other additives came in by rail and dumped into pit on west side of building.
- 14-foot pit for conveyor leg and conveyor system moved product to correct bin.
- Approximately 28 tons of AN was stored in the large bin and another 20-30 tons were along the west wall.

# West, Texas Fertilizer **Explosion**



**The fertilizer plant exploded in the small Central Texas farming community of West, about 20 miles north of Waco, leaving as many as 15 people dead, including 12 first responders, and more than 160 were injured. The damage encompassed over 37 blocks.**





# OSHA INSPECTION RESULTS

- OSHA provided safety and health oversight at the blast site daily, continuing for four months.
- The specific cause of the explosion has not been determined.
- Possible explanation - The ammonium nitrate heated in fire, melted and when the structure collapsed, it covered the heated ammonia nitrate, resulting in the explosion.
- ATF, EPA, CSB also conducted investigations.



# OSHA's Mission

The Occupational Safety and Health Administration was created to:

- Encourage employers and employees to reduce workplace hazards and to implement new or improve existing safety/health programs;
- Provide for research in occupational safety and health;
- Establish "separate but dependent responsibilities and rights" for employers and employees for the achievement of better safety and health conditions;
- Maintain a reporting and recordkeeping system to monitor job-related injuries and illnesses;
- Develop mandatory job safety and health standards and enforce them effectively.

# OSHA Region VI Area Office Staffing & Mission

## **Typical OSHA Area Office Staffing**

- One Area Director
- Two Assistant Area Director
- Comprised of 14 CSHO's (Two Teams)
- General Industry Team-7 CSHOs
- Construction Team-7 CSHOs

## **Mission**

### **Programmed Inspections (Enforcement)**

- Random selection by computer report
- Special emphasis programs based on kinds of hazards in a line of work
- Comprehensive with chance of "Focus"

# OSHA Region VI Area Office Staffing & Mission

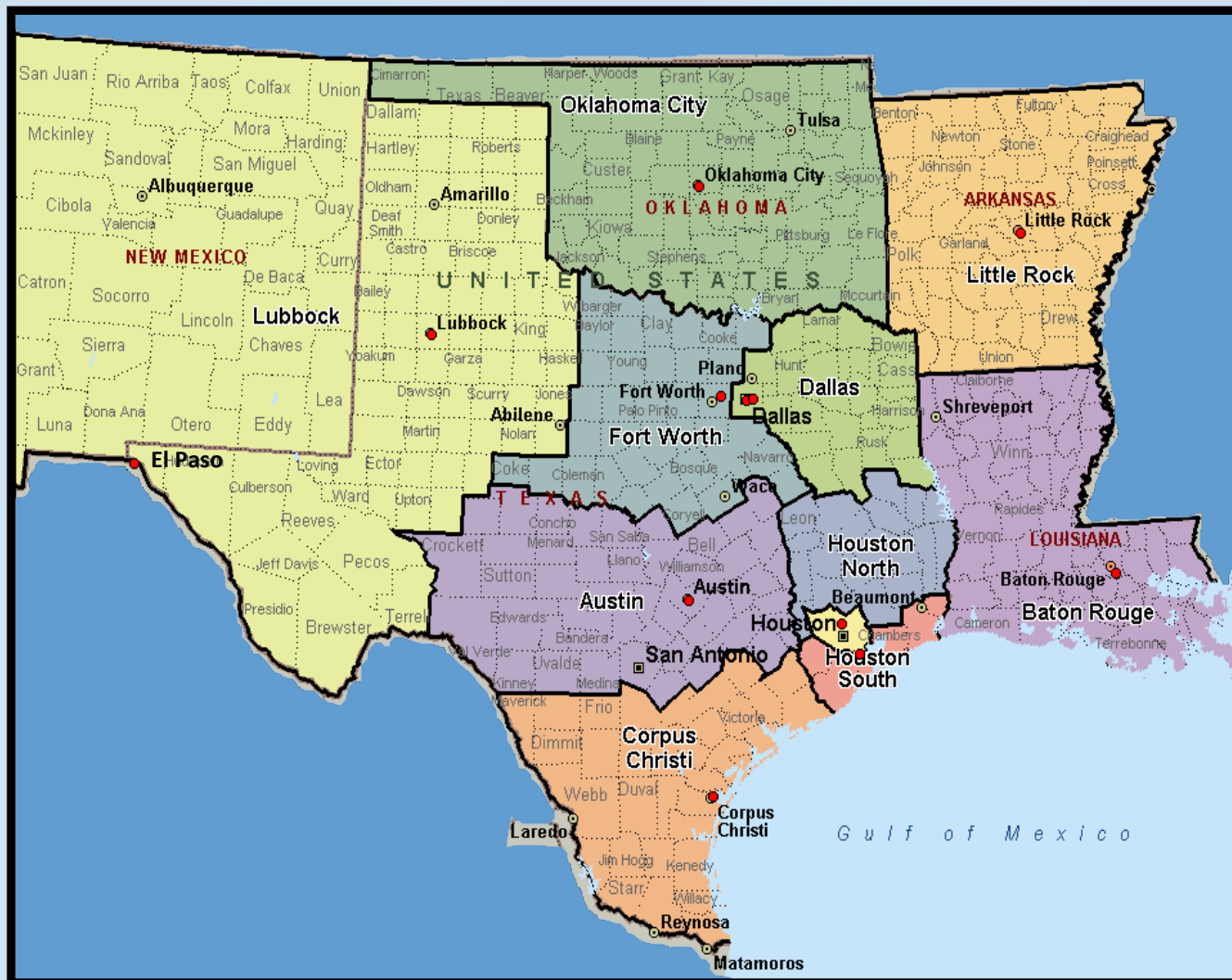
## Mission

### **Un-programmed inspections (Enforcement)**

- All work-related fatalities within 8 hours (same as current requirement)
- All work-related in-patient hospitalizations of one or more employees within 24 hours
- All work-related amputations within 24 hours
- All work-related losses of an eye within 24 hours
- **Complaints:** Signed by current employee or “phone & fax” ignored by the employer
- **Referral:** Notice of a hazard by a credible safety professional or confirmed report from the media or by another government agency and as evaluated by the Area Director



# OSHA Region VI Coverage



# OSHA's Role - National Response Framework

## National Response Framework

- Federal Emergency Management Agency
- (FEMA) lead
- Stafford Act
- State request and Presidential Declaration
- Natural Disasters and Terrorist Attacks
- Tax payer funded (DRF)



# Types of Disasters

- Man-Made
  - Oil / Chemical Spills
  - Radiation Releases
  - Terrorist Attacks
- Natural
  - Hurricanes
  - Tornadoes
  - Earthquakes
  - Wildfires
  - Floods
  - Mudslides



# OSHA Region VI Emergency Response Team (RERT)

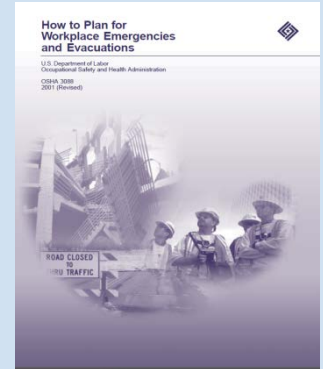
- **OSHA Region VI Emergency Response Team (RERT)**
  - Approximately forty-nine members, broken down into three (3) teams (Red/White/Blue) with the responsibility of staffing the roles as designated within the Regional Emergency Management Plan (REMP)
- **Regional Emergency Management Plan (REMP)**
  - Provides a framework for response to ALL catastrophic incidents
  - Features a scaleable/flexible plan accommodating large/limited scale incidents
  - Operates using a Support Cell Concept
  - The Support Cell is directed by a Deputy Incident Commander (DIC)
  - The Joint Field Officer (JFO) Liaison is located at the Joint Field Office (JFO)



# Planning for Emergencies

## Planning for Workplace Emergencies

- Lack of planning for emergencies have been noted as contributing factors for fatalities during workplace emergencies.
- An emergency action plan covers designated actions employers and employees must take to ensure employee safety from explosions, fires, toxic releases, natural disasters and other emergencies.
- If a company elects to establish and maintain onsite emergency response capabilities, then the company must comply with the OSHA HAZWOPER Standard and address preparing an emergency response plan, employee training, medical monitoring, recordkeeping, etc.



# OSHA Standards Related to Process Safety, Hazardous Chemicals, Emergency Response

**OSHA focuses its efforts to help improve safety at facilities handling hazardous chemicals using the following standards:**

- Process Safety Management, 29 CFR 1910.119
- Hazardous Waste Operations and Emergency Response, 1910.120
- OSHA Hazard Communication Standard with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), 1910.1200
- Confined Spaces 29 CFR 1910.146
- Emergency Action Plans 29 CFR 1910.38
- Fire Prevention, 29 CFR Subpart L

# Process Safety Management (PSM)

## Phillips 66 Company, Houston Chemical Complex 1989

- The accident resulted from a release of extremely flammable process gases that occurred during regular maintenance operations on one of the plant's polyethylene reactors. More than 85,000 pounds (39 t) of highly flammable gases were released through an open valve almost instantaneously.
- During routine maintenance, isolation valves were closed and compressed air hoses that actuated them physically disconnected as a safety measure. The air connections for opening and closing this valve were identical, and had been improperly reversed when last re-connected. As a result, the valve would have been open when the switch in the control room was in the "valve closed" position. After that, the valve was opened when it was expected to stay closed, and finally passed the reactor content into air.
- A vapor cloud formed and traveled rapidly through the polyethylene plant. Within 90 to 120 seconds, the vapor cloud came into contact with an ignition source and exploded with the force of 2.4 tons of TNT. Ten to fifteen minutes later, that was followed by the explosion of the 20,000-US-gallon (76,000 L) isobutane storage tank, then by the catastrophic failure of another polyethylene reactor, and finally by other explosions, which was estimated to be about six in total.



# Process Safety Management (PSM)

- PSM emphasizes the management of hazards associated with highly hazardous chemicals and establishes a comprehensive management program that aims to prevent the unexpected release of highly hazardous toxic, reactive, or flammable chemicals.

## **PSM Program (29 CFR 1910.119)**

- Requires companies to compile process safety information (PSI) for the purpose of preparing process hazard analyses (PHA), operating procedures, pre-startup safety reviews (PSSR), mechanical integrity programs (MI), and establish of management of change (MOC) procedures.
- Other requirements include: contractor evaluation, incident investigation, emergency planning, and compliance audits.
- In Region VI, approximately 50 PSM facilities are inspected each year; and include chemical plants, oil refineries, food processors, etc.



# Hazardous Waste and Emergency Response Operations

## Hazardous Waste and Emergency Response Operations

- The HAZWOPER standard provides employers and employees with the information and training criteria necessary to improve workplace health and safety, thereby reducing the number of injuries and illnesses resulting from exposure to hazardous substances.

### **Application: OSHA standard 1910.120 covers the following operations:**

- Clean-up conducted at uncontrolled hazardous waste sites.
- Clean-up operations at sites covered by the Resource Conservation and Recovery Act of 1976 (RCRA).
- Voluntary clean-up operations at uncontrolled hazardous waste sites.
- ***1910.120(a)(1)(v)Emergency response operations for releases of, or substantial threats of releases of, hazardous substances without regard to the location of the hazard.***

# Emergency Response Plan

## Are You Prepared?

### ***Emergency Response Plan (ERP) 1910.120(q)(1)***

- Employers that require employees to respond to emergencies must develop a written emergency response plan.
- If employees evacuate and none of the employees assist in handling the emergency, the employer is exempt from paragraph (q) and does not need to develop an emergency response plan.
- These employers must, however, develop an emergency action plan for the safe evacuation of personnel and ensure that the training of employees is consistent with 29 CFR 1910.38.

# Hazardous Waste and Emergency Response Operations OSHA Standard 1910.120

## ***Emergency Response Plan (ERP) 1910.120(q)(2)***

The emergency response plan must include the following elements:

- Pre-emergency planning and coordination with outside parties,
- Personnel roles, lines of authority, training, and communication,
- Emergency recognition and prevention,
- Safe distances and places of refuge,
- Site security and control,
- Evacuation routes and procedures,
- Decontamination,
- Emergency medical treatment and first aid,
- Emergency alerting and response procedures,
- Critique of response and follow-up, and
- PPE and emergency equipment

# Hazardous Waste Operations & Emergency Response Training Requirements

## 29 CFR 1910.120(q)(6) - Training

Training shall be based on the duties and function to be performed by each responder of an emergency response organization.

**Trainers.** Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach.

**Refresher training.** Employees shall receive annual refresher training to maintain their competencies at least yearly.

Types of Training Include:

- *First responder awareness level*
- *First responder operations level*
- *Hazardous materials technician*
- *Hazardous materials specialist*
- *On scene incident commander*



# HAZWOPER Training “Breakdown”

***First responder awareness level – No specific number of training hours***

***First responder operations level – 8-hours or have objectively demonstrated competency***

***Hazardous materials technician – 24-hours equal to operations level, plus additional competencies***

***Hazardous materials specialist – 24-hours equal to technician level, plus additional competencies***

- Link to OSHA's HAZCOM Website:

<https://www.osha.gov/dsg/hazcom/whatishazcom.html>

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- Link to Region 6 Regional Response Team Website: <http://rrt6.org/>



# OSHA Letters of Interpretation

OSHA standards will sometimes be further explained in a “*Letter of Interpretation*”.

1910.120 HAZWOPER Letters of Interpretation:

[http://www.osha.gov/pls/oshaweb/owasrch.search\\_form?p\\_doc\\_type=INTERPRETATIONS&p\\_to\\_c\\_level=3&p\\_keyvalue=1910.120&p\\_status=CURRENT](http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=INTERPRETATIONS&p_to_c_level=3&p_keyvalue=1910.120&p_status=CURRENT)

The links for a few of these letter as they relate to firefighters and emergency response are listed below:

- FEB 21, 1990- Training requirements under 1910.120 for General firefighters and police officers.  
[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=INTERPRETATIONS&p\\_id=19931](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=19931)
- AUG 1, 2003- Firefighter training requirements to respond to emergency releases, or potential emergency releases, of hazardous substance.  
[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=INTERPRETATIONS&p\\_id=24753](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24753)
- Nov 7, 2008- Clarification of CPL 02-02-073 as it pertains to emergency response training for firefighters.  
[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=INTERPRETATIONS&p\\_id=27409](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=27409)

# OSHA Standards for Emergency Planning

**OSHA standards can interface with HAZWOPER depending on the specific hazards on the site and the work being performed. A few of these other standards may include:**

## **Subpart E – Means of Egress**

- 1910.37 Means of egress
- 1910.38 Employee emergency plans and fire prevention plans- Appendix Means of Egress

## **Subpart H – Hazardous Materials**

- 1910.119 Process safety management of highly hazardous chemicals
- 1910.120 Hazardous waste operations and emergency response

## **Subpart I – Personal Protective Equipment**

- 1910.132 Personal Protective Equipment
- 1910.133 Eye and face protection
- 1910.134 Respiratory protection
- 1910.135 Head protection
- 1910.136 Foot protection
- 1910.138 Hand protection

## **Subpart J – Environmental Controls**

- 1910.146 Permit-required confined spaces
- 1910.147 Control of hazardous energy sources

## **Subpart K – Medical and First Aid**

- 1910.151 Medical services and first aid

## **Subpart L – Fire Protection**

- 1910.155-156 Fire protection and fire brigades
- 1910.157-163 Fire suppression equipment
- 1910.164 Fire detection systems
- 1910.165 Employee alarm systems
- Appendices A-E of Subpart L

# OSHA Hazard Communication Standard (HCS) with the Globally Harmonized System of Classification and Labeling of Chemicals

<https://www.osha.gov/dsg/hazcom/ghs.html>

## 29 CFR 1910.1200 – Hazard Communication

- On September 30, 2009 OSHA issued a proposed rule to align the OSHA Hazard Communication Standard (HCS) with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
- On March 20, 2012 OSHA issued the Final Rule aligning the HCS to the GHS.

### What you need to do and when:

**Chemical users:** Continue to update safety data sheets when new ones become available, provide training on the new label elements and update hazard communication programs if new hazards are identified.

**Chemical Producers:** Review hazard information for all chemicals produced or imported, classify chemicals according to the new classification criteria, and update labels and safety data sheets.

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and SDS format.	Employers
June 1, 2015*	Comply with all modified provisions of this final rule, except:	Chemical manufacturers, importers, distributors and employers
December 1, 2015	Distributors may ship products labeled by manufacturers under the old system until December 1, 2015.	
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period	Comply with either 29 CFR 1910.1200 (this final standard), or the current standard, or both.	All chemical manufacturers, importers, distributors and employers



# OSHA Hazard Communication Standard (HCS) with the Globally Harmonized System of Classification and Labeling of Chemicals

## Hazard Classification and Assessment

- Physical hazard: A chemical with scientific evidence that it is a (for example) combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, unstable, or water reactive.
- Health hazard: A chemical with scientific evidence that acute (immediate) or chronic (long-term) health effects may occur in employees who are exposed. OSHA considers chemicals to be "health hazards" if they are carcinogens, toxic, irritants, corrosives, sensitizers, or damaging to lungs, skin, mucous membranes, or eyes (to name a few).

Lists of hazardous chemicals, for example, include:

- 29 CFR 1910, Subpart Z
- Threshold Limit Values for Chemical Substances and Physical Agents  
American Conference of Governmental Industrial Hygienists (ACGIH).

# OSHA Hazard Communication Standard (HCS) with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

- On the OSHA website under 'Safety and Health Topics' there is a Hazard Communication webpage with many resources and documents such as the Federal Register, 'Old' vs 'New' standard comparison...

■ <https://www.osha.gov/dsg/hazcom/whatishazcom.html>

UNITED STATES DEPARTMENT OF LABOR

OSHA

Occupational Safety & Health Administration

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Hazard Communication

Aligns with the UN's Globally Harmonized System of Classification and Labeling of Chemicals

The standard that gave workers the right to know, now gives them the right to understand.

Safety & Health Topics Page: Hazard Communication 1994

Labeling

Safety Data Sheets

Pictograms

Hazard Communication Wallet Card

Effective Dates

Highlights

- NEW APL Letter A | APL Letter B | APL Letter C | APL Letter D
- NEW Hazard Communication Small Entity Compliance Guide for Employers That Use Hazardous Chemicals
- NEW Hazard Communication Steps to an Effective Hazard Communication Program for Employers That Use Hazardous Chemicals Fact Sheet
- NEW Letter of Interpretation Classification of Combustible Dusts under the Revised Hazard Communication Standard, [1910.1200, 1910.1200(d)]
- NEW Comparison of NFPA 704 & HCS 2012 Labels QuickCard [PDF]
- HCS/HAZCOM 2012 Final Rule
  - HCS/HAZCOM Final Rule Regulatory Text
  - Federal Register: The Final Rule was published on March 26, 2012 and became effective May 25, 2012
    - Federal Register [PDF], 82 FR
    - 2012 OSHA/HAZCOM
- HCS Comparison: HCS/HAZCOM 1994 and HCS/HAZCOM 2012
  - Side-by-side
  - Redline Strikethrough of the Regulatory Text
- HAZCOM 1994
- Press Release: US Department of Labor's OSHA publishes final rule to update the Hazard Communication Standard (HCS)
- Guidance
  - OSHA Worker Safety Data Sheet
  - Label and Pictogram Fact Sheet
  - Fact Sheet
  - December 2012 Training Fact Sheet
  - Quick Cards
- August 2012 OSHA/SHC Alliance Webinar Downloadable Hazard Communications 2012 Presentation [PDF]
- Hazard Communication: 1 Year of Implementation Downloadable 2013 Hazard Communication Presentation [PDF]
- Question of the Month

<http://www.osha.gov/dsg/hazcom/index.html>

[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)

For more information:  
**SHA<sup>®</sup>** Occupational  
Safety and Health  
Administration  
U.S. Department of Labor  
osha.gov (800) 321-OSHA (67421)

# What is a Confined Space?

OSHA Confined Space Standard 1910.146

## **Confined Space-Definition**

- Is large enough and so configured that an employee can enter bodily and perform work;
- Has limited or restricted means of entry or exit;
- Is not designed for continuous human occupancy.
- Examples: Tanks, manholes, boilers, silos, sewers, bins, pits, vaults
- Hazards: Oxygen deficiency, flammable and toxic gases, mechanical

## **Permit Required Confined Space-Definition**

- Permit, evaluate, isolate the space, PPE, ventilate, continuous testing and observation, complete permit.



# Confined Space Training & Emergency Rescue Services

## Confined Space Training

- The employer shall provide training ensuring all employees possess understanding, knowledge, and skills necessary for the safe performance of the duties.

## Emergency and Rescue Services

- Evaluate a prospective rescuer's ability to respond to a rescue summons in a timely manner, considering the hazard(s) identified, including ability to perform rescue functions appropriately (permit spaces).
- Evaluate a **rescue team(s)** or service ability to reach the victim(s) within a time frame that is appropriate for the permit space hazard(s) (3 to 5 minutes rescue)/(14 minutes recovery)
- Ensure that affected employees practice making permit space rescues at least once every **12 months**, by means of simulated rescue operations.
- Train affected employees in **basic 1<sup>st</sup> Aid** and **cardiopulmonary resuscitation (CPR)**
  - Ensure that at least one member of the rescue team or service holding a current certification in 1<sup>st</sup> Aid & CPR is available.



# Updates to OSHA's Recordkeeping and Reporting Rule

## Expanded Reporting Requirements

The rule expands the list of severe work-related injuries and illnesses that all covered employers must report to OSHA.

### For Workplaces Under Federal OSHA Jurisdiction

- Final rule became effective January 1, 2015

### For Workplaces in State Plan States

- States encouraged to implement new coverage provisions on January 1, 2015, or as soon after as possible.
- Check with your State Plan for their implementation date of the new requirements.

### ***Starting January 1, employers must report the following to OSHA:***

- All work-related fatalities within 8 hours (same as current requirement)
- All work-related in-patient hospitalizations of one or more employees within 24 hours
- All work-related amputations within 24 hours
- All work-related losses of an eye within 24 hours

### ***Bottom Line***

- If the injury or illness resulted in a fatality, hospitalization, amputation or loss of an eye, report to OSHA.
- If you are in an industry covered by OSHA's updated recordkeeping requirements, also make a record of the injury or illness in the OSHA 300 Log.

OSHA's Site for Emergency Preparedness & Response  
<https://www.osha.gov/SLTC/emergencypreparedness>

# Questions??

**CONTACT INFO:**

OSHA Region VI

Main Office Number: 972-850-4145