Fire Safety and Utility Controls

CERT Basic Training
Unit 2
Unit Objectives

- Explain role of CERTs in fire safety
- Identify and reduce potential fire and utility risks
- Describe CERT sizeup process
- Conduct basic sizeup for a fire emergency
- Explain basic safety precautions
- Identify hazardous materials
- Extinguish small fires using a fire extinguisher
Unit Topics

- Fire chemistry
- Fire and utility hazards in the home, workplace, and neighborhood
- CERT sizeup
- Fire sizeup considerations
- Firefighting resources
- Fire suppression safety
- Hazardous materials
Role of CERTs

CERTs play very important role in fire safety by:

- Extinguishing small fires
- Preventing additional fires by removing fuel sources
- Shutting off utilities
- Assisting with evacuations, when necessary
CERT Priorities

- Help in emergencies before professional responders arrive
- Rescuer safety is number one priority
  - Always work with a buddy
  - Always wear safety equipment

CERT Goal:
Do the greatest good for the greatest number
The Fire Triangle

- Heat
- Fuel
- Oxygen
5 Classes of Fire

A
For use with **ordinary materials** like cloth, wood and paper.
Often found in homes and businesses

B
For use with **combustible and flammable liquids** like grease, gasoline, oil and oil-based paints.
Often found in homes and businesses

C
For use with **electrical equipment** like appliances, tools, or other equipment that is plugged in.
Often found in homes and businesses

D
For use with **flammable metals**
Often found in factories

K
For use with **vegetable oils**, animal oils and fats in cooking appliances.
Reducing Electrical Hazards

- Avoid the “electrical octopus”
- Don’t run cords under carpets
- Check for and replace broken or frayed cords
- Maintain appliances
Electrical Emergencies

- Know where power shutoffs are for:
  - Appliances
  - Circuit breakers
  - Fuses
- Post shutoff directions next to all utilities
- Know procedures for turning power back on
Shutoff Procedures

- Fuse box with shutoff
- Circuit box with shutoff
Natural Gas Hazards

- Asphyxiant
  - Robs body of oxygen
- Explosive
  - Can easily ignite
Natural Gas Hazard Awareness

- Install natural gas detector
- Install carbon monoxide detector in home
- Test batteries for natural gas and carbon monoxide detectors every month
  - Change batteries every 6 months
- Locate and label gas shutoffs
  - Have proper non-sparking tool
Gas Shutoff

- Locate and label gas shutoff valves
- If not automatic, know procedures for shutting off gas
L.I.E.S.

- Always read labels
- Use L.I.E.S. storage procedures (Limit, Isolate, Eliminate, Separate)
CERT Sizeup

1. Gather Facts
2. Assess Damage
3. Consider Probabilities
4. Assess Your Situation
5. Establish Priorities
6. Make Decisions
7. Develop Plan of Action
8. Take Action
9. Evaluate Progress

REMEMBER:
CERT SIZEUP IS A CONTINUOUS PROCESS
CERT Fire Sizeup

- Helps responders decide:
  - Whether to attempt to suppress a fire
  - A plan of action
- Answers these questions:
  - Do my buddy and I have the right equipment?
  - Are there other hazards?
  - Is the building structurally damaged?
  - Can my buddy and I escape?
  - Can my buddy and I fight the fire safely?

Remember: The safety of individual CERT members is always the top priority
Firefighting Resources

- Portable fire extinguishers
- Wet standpipes
- Confinement
- “Creative” resources
Fire Extinguishers

- Water
- Dry chemical
- Carbon dioxide
- Specialized fire extinguisher
Extinguisher Rating/Labeling

- Labels show types of fires that extinguisher is used for:
  - Class A fire ratings: 1A to 40A
  - Class B fire ratings: 1B to 640B
- Higher number on label = greater amount of extinguishing agent
Examples of Labels
P.A.S.S.

Operating Your Fire Extinguisher:
- Pull the Pin
- Aim at the Base
- Squeeze Trigger
- Sweep

Remember:
- Test extinguisher before approaching the fire
- Keep low & approach with the wind at your back
- Back away, watching for rekindle

Common Combustibles:
- Wood, paper, cloth, etc.
- Flammable liquids & gases
- Gasoline, propane & solvents

Live Electrical Equipment:
- Computers, fax machines

Combustible Metals:
- Magnesium, lithium, titanium

Cooking Media:
- Cooking oils & fats
Interior Wet Standpipes

- Usually in commercial buildings or apartments
- Work in two-person teams when using wet standpipes
Safety of individual CERT members is top priority
Fire Suppression Don’ts

- Don’t get too close
- Don’t try to fight a fire alone
- Don’t try to suppress large fires
- Don’t enter smoke-filled areas
Hazardous Materials

- Corrode other materials
- Explode or are easily ignited
- React strongly with water
- Are unstable when exposed to heat or shock
- Are otherwise toxic to humans, animals, or the environment through absorption, inhalation, injection, or ingestion
Identifying Stored Hazmats

Blue 3
Red 4
Yellow 3
White W

CERT Basic Training
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The White Quadrant

- NFPA 704 Diamond White Quadrant:
  - W: Shows unusual reactivity with water
  - OX: Possesses oxidizing properties
STOP!
Hazmats in Transit

- Orange
- Red
- White
- Red
- Red & White
- Red & White
- Blue
- Yellow
- White
- Yellow & White
- Black & White
UN and NA Placards

Chemical Class

Symbol

Name

Chemical Class

Symbol

Chemical Number
Remember!
All hazardous material placards are a stop sign for CERTs
**Unit Summary**

You should know:

- Keys to effective fire suppression
- CERT sizeup and fire sizeup considerations
- Classes of fire and types of fire extinguishers
- P.A.S.S.
- How to identify hazardous materials

**Always follow the safety rules established for CERTs – personal safety comes first!**
Homework Assignment

1. Read unit to be covered in next session
2. Bring necessary supplies to next session
3. Wear appropriate clothes to next session