

Responsibilities and Goals

Training must be based on the duties and functions to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of the standard, must be appropriately trained for their assigned roles and duties. (WAC 296-824-300)

First responders to the awareness level:

- a. Analyze the incident to determine both the hazardous materials present and the basic hazard and response information for each hazardous material by completing the following tasks;
 1. Detect the presence of hazardous materials
 2. Survey a hazardous material incident from a safe location to identify the name, UN/NA identification number, or type placard applied for any hazardous materials involved.
 3. Collect hazard information from the current edition of the *Emergency Response Guidebook*.
- b. Implement actions consistent with the local emergency response plan, the organization's standard operating procedures, and the current edition of the *Emergency Response Guidebook* by initiating and completing the following:
 1. Protective actions
 2. Notification process

Awareness Overview

What are "hazardous materials?" Why are they so dangerous?
Why is it so important that I take this training?
These and other questions will be addressed in the next few hours.

To increase our level of awareness we will begin by examining a number of topics: the nature of the problem, why we get involved in hazardous materials incidents, basic safety guidelines, what the state and federal regulations requires, and so on.

There are many definitions used by the various federal and state agencies to define hazardous materials, dangerous goods, hazardous wastes, etc.²

For now, let us define a “hazardous material” as “any substance that poses an unreasonable risk to life, the environment, or property when not properly contained.”

Identifying the Hazardous Materials Problem

A. Increasing number of incidents

- 1) Hazardous materials rate of production is increasing daily. Growing public concerns and increased number of incidents that may affect life, the environment and properties, demands both public and private entities train and educate their response personnel.
- 2) Media coverage is more prominent with use of satellite relays.
- 3) Legislative rules and potential for litigation demands that records and documentation be accurate.

B. Hazardous materials legislation

1. State and federal governing bodies have addressed increased public concerns by passing many hazardous materials amendments to existing laws, proposing and enacting new legislative requirements
 - a) Community-Right-To-Know
 - b) Hazardous Waste Operations and Emergency Response
 - c) Washington Administrative Code Revisions

Basic Safety Guidelines

- A) Risk reduction through training
- 1) It is unfortunate that so many of the injuries and deaths that have occurred during hazardous material incidents have been the direct result of violations of recognized safety standards and practices and should NEVER have happened.
 - a) Many hazardous material accidents and exposures occur simply because emergency responders are unaware of the multiple hazards involved.
 - b) Awareness training, coupled with individual motivation, will result in improved safety attitudes at hazardous material incidents.
- B) If you rush into the hazardous material incident to effect a rescue and are overcome by exposure to the toxic material, you are now part of the problem rather than part of the solution.
- C) Actions you take at a hazardous material incident should be consistent with nationally recognized standards, such as the guidelines for emergency action outlined in the current edition of the Emergency Response Guidebook.
- 1) Approach cautiously
 - a) Protecting yourself from injury is paramount and consistent with nationally recognized standards
 - b) The Emergency Response Guidebook states: "**Resist the urge to rush in; others cannot be helped until the situation has been fully assessed.**"
 - c) **Secure the Scene.** Without entering the immediate hazard area, isolate the area and assure the safety of people and the environment. Allow enough room to move and remove your own equipment

- d) **Identify the hazards.** Identification of placards, container labels, shipping documents, material safety data sheets Rail Car and Road Trailer Identification Charts, and/or knowledgeable persons at the scene are valuable information sources. Additional information, provided by the shipper or obtained from another authoritative source, may change some of the emphasis or details found in the guide.
- e) **Assess the situation.** Performing a risk assessment from the hazards presented to the responder, always consider the following:
 - 1) Is there a fire, a spill or a leak?
 - 2) What are the weather conditions?
 - 3) What is the terrain like?
 - 4) Who/what is at risk: people, environment or property?
 - 5) What actions should be taken
 - a) Is an evacuation necessary?
 - b) What is available to accomplish the response action?
 - c) Can anything done immediately?
- f) **Obtain help.** Advise your headquarters to notify responsible agencies and call for appropriate assistance.
- g) **Decide on site entry.** Any efforts to rescue persons protect property or the environment must be weighed against the possibility of becoming part of the problem. Enter the area only when wearing appropriate protective gear.
- h) **Respond.** Respond in an appropriate manner. Establish a command post and lines of communication. Rescue casualties where possible and evacuate if necessary. Continually reassess the situation and modify response accordingly. Any response should evaluate available responders, manpower and equipment capabilities.
- i) **ABOVE ALL -** Stay out of the product, do not walk into or touch spilled materials. Avoid inhalation of fumes, smoke and vapors, even if no dangerous goods are known to be involved. Do not assume that gases or vapors are harmless because of lack of a smell-odorless gas or vapors may be harmful. Use **CAUTION** when handling empty containers because they may

- j) still present hazards until they are cleaned and purged of all residues.

Purpose of intervention

A. To reduce harm to exposures

- 1) Natural stabilization will occur. Emergency responders must recognize that all hazardous material incidents will stabilize in time even if we do nothing to intervene.
 - a) Risk of exposure vs. benefit of reducing harm
 - b) During the course of natural stabilization hazardous materials can cause injury, disability, death, and damage to the environment, property and equipment.

B. Weighing risk vs. benefit

- 1) Can I reduce the harm?
 - a) The difference between the gain and the cost is a measure of the extent to which emergency responders' intervention can positively influence natural stabilization (by reducing naturally occurring harm) at a minimum risk to life and damage to the environment (the harm attributed to intervention).
 - c) What effect will my actions have on the outcome? Emergency responders must be aware of the effect their actions, or lack of action, can have on life safety, the environment, and property and equipment damage.

Legislative mandates for training

A) SARA

- 1) As a result of so many emergency responders being injured, disabled, and killed while dealing with hazardous materials and to protect both the environment and the public at large, the federal government passed the Superfund Amendments and Reauthorization Act (S.A.R.A.) on October 17, 1986.

B) Hazardous Waste Operations & Emergency Response

- 1) One element of SARA was a directive to the Occupational Safety and Health Administration (O.S.H.A.) to promulgate worker safety regulations within sixty days.
- 2) OSHA published the interim final regulations (29 CFR 1910.120) on December 19, 1986.
- 3) The regulations were amended in 1990, 1991 and 1994
- 4) The final regulations were published on March 6, 1989.
- 5) Washington administrative rules. Washington state through their own occupational safety and health agencies (WISHA), and have formally adopted the federal regulations by administrative rule and titled them:
 - a. WAC 296-62-Part R,
 - b. WAC 296-824 (Core Rules, Emergency Response)
 - c. WAC 296-62-305 (Firefighter Safety Standards).

NFPA Hazardous Materials Standards

- A) The National Fire Protection Association has adopted three documents that relate to the way individuals and organizations respond to hazardous materials incidents:
- 1) NFPA 471 Recommended Practice for Responding to Hazardous Materials Incidents (2002)
 - 2) NFPA 472 Standard for Professional Competence of Responders to Hazardous Materials Incidents (2002)
 - 3) NFPA 473 Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents (2002)
- B) NFPA are recognized consensus standards that establish competencies by line item listed requirements for each emergency response level for public as well as private industry responders.
- 1) Today, the NFPA standard goes beyond the original 29 CFR 1910.120 which was designed to be minimum at best

- 2) The NFPA 472 standard defines in much greater detail the objectives needed to meet the competencies at each level of hazardous materials response.
- 3) This training program is designed to comply with the 2002 edition of these documents.

Requirements for Local Emergency Response Planning

- A) “The employer shall develop an Emergency Response Plan for emergencies which shall address, as a minimum, the following to the extent that they are not addressed elsewhere”:
- 1) Pre-emergency planning and coordination with outside parties.
 - 2) Personnel roles, lines of authority, training, and communication.
 - 2) Emergency recognition and prevention.
 - 3) Safe distances and places of refuge. (Methods of alerting employees and outside responders [WAC only]).
 - 4) Procedures for limited action (emergency prevention).
 - 5) Details of who will evacuate immediately and who will remain behind for limited action
 - 6) Evacuation routes and procedures.
 - 7) How to establish safe distances and places of refuge (i.e. during emergency response the incident commander (IC) decides to make changes based on new developments, i.e. changes in wind direction)
 - 8) Methods of securing and controlling access to the site
 - 9) Emergency medical treatment and first aid.
 - 10) A complete personal protective equipment (PPE) program that addresses:
 - a. Selection of PPE including selection criteria to be used and the identification, specified use and limitations of the PPE selected
 - b. Training on proper use of PPE (including maintenance)

c. Hazards created by wearing PPE including heat stress during temperature extremes, and/or other appropriate medical considerations

d. Procedures covering proper use of PPE including procedures for inspection, putting it on (donning) and removing it (doffing)

e. Maintenance of PPE including procedures for decontamination, disposal and storage

f. Methods used to evaluate the effectiveness of your PPE program

11)Emergency equipment

12)Emergency response procedures

13)Decontamination procedures determined by a hazardous materials specialist or other qualified individual

14)Methods to critically assess the response and conduct appropriate follow-up

B) "Emergency response organizations may use the local emergency response plan or the state emergency response plan to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use."