

3.4.3.7 Hazmat Defensive Actions



YOUR ORGANIZATION
STANDARD OPERATING PROCEDURES/GUIDELINES

TITLE: Hazmat Defensive Actions

SECTION/TOPIC: First Responder Operations

NUMBER: 3.4.3.7

ISSUE DATE:

REVISED DATE:

PREPARED BY:

APPROVED BY:

X

Preparer

X

Approver

These SOPs/SOGs are based on FEMA guidelines FA-197

1.0 POLICY REFERENCE

CFR

NFPA

NIMS

2.0 PURPOSE

This standard operating procedure/guideline addresses procedures for specific First Responder defensive actions (e.g., damming, diking, diversion, using sorbents, application of firefighting foam).

3.0 SCOPE

This SOP/SOG pertains to all personnel in this organization.

4.0 DEFINITIONS

These definitions are pertinent to this SOP/SOG.

5.0 PROCEDURES/GUIDELINES & INFORMATION

5.1 Procedures for Specific First Responder Defensive Actions:

GENERAL FACTORS TO CONSIDER

Due to the wide variety of situations Fire Department personnel may encounter in dealing with hazardous materials, these considerations will not attempt to provide specific guidelines on any one individual chemical or situation and are not listed in any priority.

It is important that the first arriving Fire Department company make every effort to determine what hazardous material(s) is involved, and the amount prior to taking action to stabilize the incident.

Call for additional resources EARLY. The actions taken by command in the first few minutes of an incident affects the outcome more than any other single factor. Hazardous Materials teams will be needed as well as a number of other fire companies to support site operations.

Make a slow, cautious approach to the incident. Entering the scene to make positive identification may be a considerable risk. The danger of explosion, leaking gas and poisoning may be great.

Furthermore, any "Knee-jerk" action taken prior to determining the product involved may place firefighters at considerable safety risk and may further compound the problem.

Transportation emergencies are often more difficult than those at fixed locations. The materials involved may be unknown, warning signs may not be visible or obscured by smoke and debris, the driver may be killed or missing. D.O.T. hazardous materials marking systems are inadequate because some hazardous materials in quantities up to 1,000 lbs., do not require a placard and there may be combinations of products involved with only a "dangerous" label showing. Sometimes only the most evident hazard is identified, while additional hazards are not labelled.

The following items should be considered at any Hazardous Materials incident. (Not all will be significant at any particular incident.)

1. Cooling Containers--Flame Impingement
 - a. Obtain adequate water supply, use large GPM hose streams or stang guns.
 - b. Apply heavy streams to the vapor space area above the tanks liquid line.
 - c. Use unmanned streams.
 - d. Use natural barriers to protect personnel.
2. Remove Uninvolved Materials
 - a. These actions should only be done after a complete site safety plan has been established by Command and H.I.R.T. Officers.
 - b. Move individual containers.
 - c. Move tank cars away from flame.
 - d. Cool containers before moving.
3. Stop the Leak
 - a. Use water spray to approach leak.

- b. Close valves when safe to do so.
 - c. Do not apply water to chlorine containers - it will make the leak worse.
- 4. Apply Diluting Spray or Neutralizing Agent
 - a. Dilute water-soluble liquids, such as ammonia, chlorine, LPG (No water on CL2 tanks).
 - b. Use water with caution on some materials.
- 5. Construct Dams, Dikes or Channels
 - a. Direct running liquid away from exposures.
 - b. Control run off from corrosive or toxic materials.
 - c. Use sand or dirt.
 - d. Keep product out of sewer, storm systems, canals, or other waterways, etc.
- 6. Remove Ignition Sources
 - a. Start down wind.
 - b. Eliminate all sources of heat, spark, friction.
 - c. These actions may need to be accomplished in conjunction with the proper technical advice.

Dispatch has a Reference List of personnel and organizations which may be helpful during a Hazardous Materials Emergency.

These include:

1. Fire Department personnel with particular experience or knowledge.
2. Authorities in charge of landfills and dumps where Hazardous Materials may be disposed.
3. Commercial Chemical experts with experience in handling and disposing of most common chemicals.
4. Pesticide consultants and disposal teams with equipment to clean-up agricultural chemical spills.
5. Personnel from State and Federal Regulatory Agencies. These personnel should be contacted for incidents involving transportation of Hazardous Materials.
6. Railroad information numbers.
7. Tank Truck Companies with defueling capability (in case carrier involved in incident has none).
8. Radioactivity and Military Weapons emergency contacts.

5.2 Damming:

5.3 Diking:

5.4 Diversion:

5.5 Using Sorbents:

5.6 Application of Firefighting Foam: