

# Emergency Operations

Book:	3 Emergency Operations
Chapter	IX Hazardous Materials Incidents
Subject	1 Hazardous Materials Incidents (General)
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## 1.01 Purpose

To establish guidelines for the incident evaluation and safe handling of hazardous materials incidents.

## 1.02 Policy

- A. It shall be the policy of Jersey Village Emergency Services to follow these procedures in the handling of hazardous incidents and to insure the safety of the personnel and citizens.

## 1.03 Procedure

### A. Upon Arrival

1. Establish Command
2. Size up the situation:
  - a. The first unit must consciously avoid committing itself to a dangerous situation. When approaching, slow down or stop to assess any visible activity-taking place. Evaluate the effects of wind, topography and location of the situation.
  - b. The objective of size-up is to identify the nature and severity of the immediate problem, gather sufficient information to formulate a valid action plan. A Hazardous Materials incident requires a more caution and deliberate size-up than most fire situations
  - c. Avoid premature commitment of companies and personnel to potentially hazardous locations. Proceed with caution in evaluating risks before formulating a plan and keep uncommitted companies at a safe distance.
  - d. Make careful size-up before deciding on a commitment. It may be necessary to take immediate action to make a rescue or evacuate an area, but this should be done with an awareness of risk to Emergency Services personnel, and taking advantage of available protective equipment.

- e. Don't assume anything! A wrong decision, while working with hazardous materials, can be worse than no decision.
3. Report on conditions.
4. Establish an operational perimeter.
5. Request Police Services for traffic control.
6. Initiate material identification operations:
  - a. It is imperative that the first arriving company determine what hazardous material(s) is involved, and how much, prior to taking action to stabilize the incident.
  - b. Entering the scene to make positive identification may be a considerable risk. The danger of explosion, leaking materials, gas or poison may be great.
  - c. Action taken prior to determining the product involved may be totally wrong and may severally compound the problem.
  - d. 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 dead or missing. DOT hazardous materials marking systems are inadequate because some hazardous materials in quantities up to 1000 lb. 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 labeled.
7. Attempt to identify the involved material(s) by the following:
  - a. Check placarding and/or labeling.
  - b. Check paperwork associated with the materials transportation or storage.
  - c. Check with persons directly related to the accident/incident, i.e. driver, owner, trainman, technician, plant manager, etc.
  - d. Contact shipper and/or manufacture.
  - e. Obtain the exact spelling of the materials involved.

## B. Initial Operations

1. If the incident is on a highway or roadway, request Communications to notify, Police Services and TEX DOT for assistance.
2. Obtain technical information:
  - a. Utilize the DOT Hazardous Materials Emergency Response Guidebook.
  - b. Contact ChemTrec 1-800-424-9300, Have the ChemTrec information work sheet available before calling.
  - c. Utilize other informational sources available.
  - d. Contact the shipper and/or the manufacture. (ChemTrec can assist with this).
3. Identify priorities based on the following:
  - a. The type and magnitude of life hazard involved.

- b. The type and quantity of hazardous material(s) involved.
  - c. Reference the “D.E.C.I.D.E.” mnemonic for determining the steps in dealing with a hazardous materials event.
    - D- Detect the presence of hazardous materials.
    - E- Estimate potential harm without intervention
    - C- Choose response objectives
    - I- Identify action options
    - D- Do best option
    - E- Evaluate progress
4. Identify the Objectives
- a. The objectives must be based upon those priorities, which have already been identified. They must be flexible enough to account for the dynamics of the situation.
  - b. The objectives must focus on confinement and/or control of the involved materials in such a way so as to save lives and to prevent the unnecessary exposure of on-scene or nearby personnel (including firefighters, bystanders, law enforcement personnel, etc.) to the adverse effects of the involved material(s). Objectives must also provide for the protection of uninvolved property and the environment.
  - c. Objectives must be clearly understood and well communicated among all levels of the on-scene organization, which is attempting to cope with the problem. Close cooperation and coordination is essential if disaster is to be averted.
5. Action Plan – The action plan must be based upon the identifying objectives and must be understood by all involved personnel at the scene. The action plan should be centered primarily around the following:
- a. Protection of life.
  - b. Confinement of the materials and its by-products.
  - c. Control of the material and its effects on humans, animals, property, and the environment.
6. Monitor progress of the action plan to insure that objectives are either accomplished or modified according to the dynamics of the situation.

### C. Safety

- 1. All operations up to and including the evacuation process must be accomplished with the idea of overall safety as the key component.
- 2. Members shall wear the appropriate protective clothing. A minimum of Full Protective Clothing must be worn inside the operational perimeter. Special protective clothing may be necessary depending upon the nature of the materials involved.
- 3. Be alert for the symptoms of chemical poisoning and reactions that could threaten the lives of firefighters and others involved.

4. Members who have been exposed to hazardous materials shall receive immediate medical treatment. Note: Many symptoms may be delayed up to twenty-four (24) hours after contact.
5. In general, the following safety guidelines should be observed:
  - a. Move and keep people away from the scene.
  - b. Do not walk into or touch any spilled material.
  - c. Avoid inhalation of all gases, fumes and smoke even if no hazardous materials are involved.
  - d. Do not assume that gases or vapors are harmless because of the lack of an odor.
6. Keep in mind the basic safety priorities:
  - a. Personnel safety
  - b. Safety of others
  - c. Environmental impact.

D. Communications:

1. The best, most accurate method of communications is face-to-face, person-to-person, communications.
2. Radio directions must be clear, concise and on the correct channel.
3. Communications during the incident must be, of necessity, two way in nature. Information, reconnaissance data and suggestions must flow up to Command level for evaluation. Clear directions and coordination must flow down from Command level.
4. Operations shall be conducted in accordance with ICS guidelines for communications and radio channel assignments.
5. Direct telephone communications may be made through the use of cellular phones on apparatus.

E. Coordination and Control:

1. State Law provides that the on-scene Fire Incident Commander is in charge of the incident and shall coordinate with all agencies the handling of the incident.
2. On incidents occurring within the city limits or of Jersey Village or ETJ the Emergency Services will have control and coordination of the incident.
3. On incidents occurring on private property the Emergency Services shall have control and coordination of the incident and make use of on site employees as informational resources in handling the incident.
4. The Emergency Services shall establish the Command Post for all agencies working at a hazardous materials incident.

F. Cleanup and Disposal

1. The Incident Commander's responsibility, beyond that of preserving life and property, is only to identify and if possible, contain the spill material. Under most circumstances, no attempt should be made to cleanup or decontaminate a spill unless directed and supervised by a responsible party from the industry and/or other technical advisors.
2. Professional disposal and cleanup companies should be utilized for cleanup and disposal. The spiller shall contract with the company for their services. Under no circumstances will the Emergency Services accept responsibility for cleanup or disposal.

G. Procedures (General):

It must be remembered that any and all procedures, which may be carried out at a hazardous materials incident, must be based upon and compatible with the physical properties of the involved material(s). The following list contains some basic guidelines, which may apply to hazardous situations in a general sense. The nature of materials involved will dictate more specific procedures.

1. Take all feasible steps necessary to protect or save human life. Safe guard property insofar as practical.
2. Take actions to contain and/or prevent the spread of the material. Spread sand, dirt or other collection agents. Build dikes, to contain runoff etc.
3. Keep the public as far from the scene of the incident as reasonably possible.
4. Isolate for further examination those persons who may have come in contact with the product. Obtain pertinent information on those involved.
5. Remove injured persons from the area with as little contact as possible. Hold them at a transfer point for EMS. If serious injury has occurred, demanding more than first aid measures, the patient should be sent to the nearest hospital facility capable of handling the type of emergency. Advise medical attendants and facilities of possible contamination and what materials are involved.
6. If incidents involve fire or materials subject to blowing in the wind, conduct operation from an upwind position. Keep out of smoke, fumes, or blowing materials resulting from the incident. Segregate clothing and tools used at the scene until they can be checked for contamination. Do not handle suspected material until it has been inspected.
7. In a vehicle accident involving hazardous material, detour all traffic around the accident scene.
8. There are basically four different methods of handling hazardous material spills or leaks. They are:
  - a. Absorption
  - b. Containment
  - c. Separation
  - d. Neutralization

9. Sometimes, a non-attack posture is the best approach to a hazardous materials problem. A fire in any of the following materials should signal a non-attack posture and immediate evacuation of the surrounding area:
  - a. Explosives A
  - b. Explosives B
  - c. Oxidizers
  - d. Organic peroxides
10. Hazardous materials must not be carelessly washed down storm drains or sewers. Such action could compound the problem and disaster.