

## TOWNSHIP FIRE DEPARTMENT CHAPTER 2: SUGGESTED OPERATING GUIDELINES

Part 8: Strategic Guidelines

Subject: Hazardous Materials

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Section: 2-8-10

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- 10.01 Purpose. To establish a basic philosophy and strategic plan for the safe evaluation and handling of hazardous materials incidents.
- 10.02 Goal. Develop standard first response strategies and assignments for a hazardous material incident, what procedures are to be followed regarding recognition, notification, evacuation and termination.
- 10.03 General. Hazardous Materials incidents take in a wide variety of potential situations including but not limited to fires, spills, transportation accidents, chemical reactions, and explosions. Any number of hazards may be present at these incidents and careful evaluation of the scene is vital. This guideline provides a basic framework for handling a hazardous materials incident, but does not address the specific tactics or control measures, as they need to be incident specific. This guideline although applicable to hazardous materials incidents does not in anyway reduce the need for appropriate safety precautions at ALL incidents. The use of full personal protective clothing and SCBA as well as any recommended chemical or special protective clothing and adhering to all TFD SOG's unless superseded by a specific part of this guideline, remain in effect.
- 10.04 Dispatch. The Dispatch Center will attempt to obtain any and all information from the person reporting a hazardous materials incident. The information should, if possible include material name and/or placard number, amount and size of container(s), type of problem (leak, spill, fire etc.), number of people exposed and/or injured. Dispatch should remain in communication with the person reporting the hazardous materials incident to gain additional information after the call is dispatched.

Additional information that needs to be relayed to responding units as quickly as possible includes but not limited to; wind direction, wind speed, temperature, weather forecast, safest approach to or best access to incident.

If the person reporting the hazardous materials incident is on scene of the incident, that person should be instructed to meet with the first arriving unit. Dispatch shall relay that person's location to responding units.

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- 10.05 First Arriving Unit. The first arriving unit must consciously avoid committing itself to a dangerous situation. When approaching, slow down or stop to assess any visible activity taking place. Evaluate effects of wind and topography, time of day, temperature, and exposures near the scene.

The first arriving firefighter or officer on scene will establish command and begin a scene size-up.

Command will establish a Staging Area and relay to incoming units the location. The Staging Area must be in a safe location, taking into account wind direction, spill flow, explosion potential, initial isolation distances etc. as well as scene considerations. The DOT ERG (Emergency Response Guidebook), MSDS's, Shipping Papers or other reference materials available to Command should be used to establish a safe distance for staging.

- 10.06 Size-Up. A careful size-up must be made prior to committing personnel. Life Safety must be the driving force for all decision making. It may be necessary to take immediate action to make a rescue or evacuate an area. This should be attempted only after a risk/benefit analysis is completed.

The objective of the size-up is to identify the nature and severity of the immediate problem and begin to gather needed information, identify additional resources needed, and start to formulate a valid action plan.

Avoid premature commitment of personnel to potentially hazardous locations. Proceed with caution in evaluating risks before formulating a plan and keep uncommitted personnel at a safe distance. In many cases, evaluation of the incident by TFD Hazardous Materials Group members before committing is the safest approach.

When sizing up incidents look for as many clues and pieces of information that you can. Look for labels, markers, placards, NFPA Diamonds, shipping papers, phone numbers, etc. For fixed facilities within TFD's normal response territory refer to pre-plans and request additional information from facility representatives if available (MSDS's, quantity of materials, etc). Use reference materials carried on apparatus and have Dispatch contact other sources for assistance in sizing up the incident (DNR, County Health Department, Regional Haz-Mat Team, CHEMTREC, Poison Center, etc.).

- 10.07 Action Plan. Based on the initial size-up and all information available, Command will formulate an action plan for the incident.

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The Action Plan must provide for:

1. Life safety of all fire personnel, other response personnel and the public. If a life threat exists, a risk benefit analysis will need to be considered, attempting to do the most good for the largest number of those threatened.
2. An Incident Command System.
3. An assigned Safety Officer.
4. Evacuation of or Shelter-In-Place of the endangered area if necessary.
5. How to control or stabilize the incident.
6. Means of disposal or removal of the hazardous materials.

Most hazardous materials are intended to be maintained in a safe condition for handling and transportation through confinement in a container or protective system. A hazardous materials incident is usually related to the material escaping from its container or containment system thus creating a hazardous incident. The strategic plan must identify the method of hazard control, to either:

1. Control the leak or spill.
2. Get the hazardous material into a safe container.
3. Neutralize it.
4. Allow it to dissipate safely.
5. And/or coordinate its proper disposal.

The site-specific action plan must identify the method of hazard control and identify the resources necessary to accomplish this goal. It may be necessary to select one method over another due to the availability of a particular resource or to adopt a "holding mode" to wait for needed personnel, equipment or materials.

Avoid committing personnel and equipment prematurely or "experimenting" with techniques and tactics. It may be more prudent to wait for the proper special equipment or technical assistance.

As a general policy, Township Fire Department, Inc. does not clean up and dispose of hazardous materials.

10.08 Control of Hazardous Area. There are three zones associated with hazardous material incidents, Hot, Warm and Cold.

- A. Hot Zone – Is the area in which the release occurred. It is the zone immediately surrounding the hazardous incident and it extends far enough to prevent adverse effects from hazardous materials released to personnel outside the zone. This zone is also referred to as the exclusion zone or the restricted zone. The Hot Zone is usually Immediately dangerous to Life and Health or contains physical threats.

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- B. Warm Zone – Is the zone where personnel and equipment decontamination and hot zone support take place. This zone is also referred to as the contamination reduction zone or limited access zone.
- C. Cold Zone – Is the zone that contains the Command Post and other support functions required to control the incident. This zone is also referred to as support zone or clean zone.

10.09 Use of Non-Fire Department Personnel. In some cases, it may be advantageous to use non-fire department personnel to evaluate hazards, and or perform certain tasks that they are trained for or have expertise in.

When such personnel are utilized they must be outfitted with the proper personal protective equipment (PPE) and be trained in the safe use and limitations of that equipment. Fire department personnel with the proper PPE must closely monitor and/or accompany such personnel for safety.

The Incident Commander is responsible for the safety of ALL personnel involved at any hazardous materials incident.

10.10 Special Considerations. Due to the varying nature of hazardous material responses, there are any number of situations personnel may encounter that present special considerations. These considerations are generalized below and are not meant to provide specific guidelines on any one individual chemical or situation, nor are they all-inclusive or prioritized.

1. If the first arriving unit cannot determine the names of the materials involved, an attempt should be made to at least narrow it down to a family of chemicals (to help predict the properties of the released materials).
2. If no information is available about the materials involved, Guide number 111 from the Emergency Response Guidebook (ERG) should be used until such time as product specific information is available.
3. If the Hazardous Materials Group is not initially dispatched to the incident, request Dispatch to tone them out.
4. TFD has limited PPE available to handle most hazardous material incidents. Committing personnel without the proper PPE and necessary training on its use and limitations may potentially place them at great personal risk.
5. The Incident Commander at all hazardous material incidents shall be trained at the Hazardous Materials Operations level or higher and said training and qualifications shall be current.

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10.11 Termination Procedures. All hazardous material incidents eventually come to an end. Termination is the transition phase between the end of the emergency and the initiation of restoration and recovery operations. It is important that every hazmat incident be properly terminated. Proper termination activities will include; Scene Debriefing, Post Incident Analysis, and Post Incident Debriefing.

- A. Scene Debriefing – informs the responders before they are released from the scene what hazardous materials they were or potentially were exposed to and their signs and symptoms. Identify what equipment requires servicing, maintenance or replacement. Identify what equipment needs decontamination or what expended equipment needs proper disposal. Identify unsafe conditions that will impact cleanup so that the owners or contractors are made aware of before the site is turned over to them. Identify problems requiring immediate action. Say “Thank You” to the responders.
- B. Post Incident Analysis – assures that the incident has been properly documented and reported (Safety Procedures, Site Operations, Hazards Faced, Resources Used, etc.). Determine the financial responsibilities.
- C. Post Incident Debriefing – is a mechanism in which emergency responders from TFD and other responding departments as well as any other agency with the need to know can exchange information relevant to the hazardous material incident. The primary objective of the PID should be a positive learning experience by promoting sharing of information, a willingness to cooperate through teamwork, identify lessons learned and what improvements can be made in the areas of training, responding, and materials. Refer to TFD’s SOG 1-2-21 for additional information on PID.