


SOG# 503-2	Standard Operating Guideline		
	Cumberland Road Fire Department Inc. <hr/> Hazardous Materials Response	Approved By	
		Steven Parrish, Fire Chief	
		Effective Date	Revised Date
		4-7-1992	10-1-2022

SCOPE:

This guideline shall apply to all members of the Cumberland Road Fire Department and shall be adhered to by all members.

PURPOSE:

To establish the procedures for Cumberland Road Fire Department response to hazardous materials incidents.

DEFINITIONS:

Emergency Response Guide – (ERG) book or smartphone application utilized for identification of hazardous materials and providing critical information on first aid, fire extinguishment and evacuation distances.


Guideline - a general rule, principle, outline of a policy.

Hazardous Materials – (HAZMAT) materials that pose a health hazard, life threat or environmental danger if not mitigated.

Member – any paid and/or volunteer, personnel affiliated with the department.

Parts Per Million – (ppm) number of units of mass of a contaminant per million units of total mass of a substance, typically used in measuring contaminants in air samples.

Shall - indicates a mandatory requirement.

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Guidelines:

Cumberland Road Fire Department is an all-hazards emergency response agency. Operational members of the department are required to obtain and maintain certification in Hazardous Materials Awareness and Operations to manage potential hazardous materials incidents. There are many incidents that the department responds to on a daily basis that have the potential for a hazardous materials component. It is important to be prepared for any hazardous materials incident as it occurs to ensure that Cumberland Road Fire Department members and the public are safe. As with all incidents, the goal is to protect life, stabilize the situation, and conserve property and the environment.

Training Requirements:


All operational members assigned to perform duties at Hazardous Materials incidents or have the potential to involve hazardous materials shall be IFSAC HAZMAT Operations certified (or the equivalent). Additionally, all operational members of Cumberland Road Fire Department are required to conduct six hours of hazardous materials refresher training annually.

The types of incidents requiring this certification are, but not limited to, the following:
 Motor Vehicle Accident Carbon Monoxide Alarm activation
 Unknown Odors Liquid Propane or Natural Gas leaks
 Vehicle Fires Chemical Releases

HAZMAT Response Activities:

Hazardous Materials Operations level certified personnel are permitted to conduct limited operations in response to a hazardous material incident. The main tasks that Operations personnel may perform are:

- Identification of potential hazards (Emergency Response Guide, 5 gas meter, etc.)
- Identification of action options (evacuation, request HAZMAT or Regional Response

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Team, containment, etc.)


- Implementation of action plan (foam fire streams, diking, damming, etc.)
- Performing emergency decontamination
- Assisting Hazardous Materials Technician operations
 - Donning, doffing personal protective equipment
 - Decontamination (mass and technical decontamination)
 - Evidence gathering and sampling operations
 - Product control (diking, damming, ventilation, absorption, etc.)
 - Victim rescue and recovery operations

Response:

Upon dispatch, the unit shall respond in the appropriate traffic mode. If the incident is known to be hazardous materials related, the Company Officer shall attempt to direct the apparatus to approach the incident from a safe direction (uphill, up wind, etc.). The first arriving Officer shall conduct an incident scene size up and establish command. Depending upon the nature of the incident this size up may be a windshield survey from a safe distance. Every attempt shall be made to avoid committing the unit to a hazardous situation. When approaching, slow down or stop to assess any visible activity occurring. Attempt to determine the direction and effects of the wind on the scene, topography, and the location of the situation. The Incident Commander shall advise all other units to stage at a safe location until instructed to take a specific action. If the Incident Commander determines that the situation requires a Hazardous Materials Technician response, they will request a HAZMAT or Regional Response Team response.

Size-Up:

The Incident Commander shall conduct a careful scene size-up before determining a course of action. The objective of the size up is to gather sufficient information concerning threats, hazards, extent, and risks involved with the incident to develop a valid action plan. Defensive operations shall be initiated to mitigate the hazardous materials incident. Hazardous materials incidents require a more cautious and deliberate approach to conducting the size up and initiating operations than most fire department operations. However, immediate action may be required for evacuations or rescues of endangered individuals.

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These operations shall be conducted with a full awareness of the risks involved and making use of full personal protective equipment.

The Emergency Response Guide shall be referenced to assist the Incident Commander in determining a course of action. The Emergency Response Guide provides information regarding the hazardous materials involved, evacuation distances, mitigation measures and first aid for exposed individuals. Hazard potential shall be evaluated considering the time of day, current and forecasted weather conditions, wind speed and direction, topography of the incident scene and human exposures.

Action Plan:


The Incident Commander shall reference the Emergency Response Guide while developing the action plan. The Cumberland Road Fire Department Incident Commander shall focus upon developing and implementing defensive operations, with the exception of rescues of exposed individuals. Hazardous Materials Technicians shall conduct any offensive operation.

The incident action plan shall identify methods of containment and control of the hazardous materials and the resources available or required to accomplish these tasks. Only Hazardous Materials Technicians shall be assigned tasks involving direct contact with the hazardous materials. All incident action plans shall provide for:

- Safety of Emergency Responders and residents
- Evacuation of the endangered area, if necessary
- Incident stabilization
- Control or containment of the hazardous materials
- Mitigation of the hazardous materials

Hazardous Materials Incident Control Zones:

There are three Control Zones for a hazardous materials incident. The Exclusion Zone (Hot Zone) which is the area immediately surrounding the hazardous material or release. The Contamination Reduction Zone (Warm Zone) is the area surrounding the Hot Zone, typically where decontamination occurs and located between the Hot Zone

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and Cold Zone. Finally, the Support Zone (Cold Zone) is the contamination free area surrounding the Warm Zone where emergency operations are coordinated and conducted.

Exclusion Zone:

The Exclusion Zone (Hot Zone) is the area in which personnel are potentially in immediate danger from the hazardous materials release. This zone is established by Incident Command and controlled by fire department members. Access to this area shall be rigidly controlled by Hazardous Materials Team members or assigned Cumberland Road Fire Department personnel. Only trained personnel with appropriate personal protective equipment assigned to tasks within the Hot Zone shall be permitted to enter.


Atmospheric monitoring shall be utilized in maintaining the boundaries for the Hot Zone. The following levels will be used:

- Oxygen levels below 19.5% or above 23.5%
- Hydrogen Sulfide levels of 10ppm or greater
- Carbon Monoxide levels of 35ppm or greater

The Exclusion Zone shall be identified to all responding units utilizing geographical landmarks such as roads, intersections, etc. No unauthorized individuals are permitted to enter the Exclusion Zone. This includes Firefighters, Police, EMS, civilians, or the media.

Contamination Reduction Zone:

The Contamination Reduction Zone (Warm Zone) is a larger area in which a lesser degree of risk exists for personnel from the effects of the hazardous material. All nonresponse personnel and civilians shall be removed from this area. The boundaries of this zone shall be controlled by Cumberland Road Fire Department personnel following guidance established by the Incident Commander in consultation with the HAZMAT Team Leader. Appropriate personal protective equipment shall be worn while operating in the Warm Zone. Decontamination operations are conducted within this area, as are containment and suppression operations.

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Evacuation Area:

The evacuation area shall be determined utilizing the Emergency Response Guide and the expertise of the Hazardous Materials Team. Weather conditions, wind direction and speed, the hazardous material involved, and the terrain all are key factors in determining the size and shape of the evacuation area. It may not be necessary or possible to evacuate all individuals from the evacuation area. A shelter in place technique may be utilized for certain toxic or irritant vapors are carried downwind. In this instance, having residents remain indoors with all windows and doors closed and the air conditioning turned off shall be used. The safety of all personnel and civilians is the responsibility of the Incident Commander.

Support Zone:

The Support Zone (Cold Zone) is the large area surrounding the Warm Zone where the risk of potential harm from the hazardous material is minimal. All support functions are conducted in this area, such as rehabilitation, Triage, Treatment and Transportation of victims, reunification, etc. The use of personal protective equipment is not required. Control of individuals entering and leaving this Zone is provided by Law Enforcement personnel or additional Fire Department personnel.

References:

29 CFR 1910.120

NFPA 1072

Transportation Emergency Preparedness Program Planning Products Model Procedure