

### 3.4.3.1 Hazmat Roles and Actions



YOUR ORGANIZATION  
STANDARD OPERATING PROCEDURES/GUIDELINES

**TITLE:** Hazmat Roles and Actions

**SECTION/TOPIC:** First Responder Operations

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**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 definition and role of First Responder Operations personnel, explanation of appropriate (defensive) actions during hazardous materials incidents.

#### 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 Definition and Role of First Responder Operations Personnel:

**First Responder Awareness:** First responders at the awareness level are individuals who are likely to

witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

**First Responder Operations:** Respond to releases or potential releases of hazardous substances as part of the initial response. Expected to take defensive actions without trying to stop the release, for the purpose of protecting persons, property, and the environment. (This is generally considered the minimum acceptable level of training for members of fire and EMS departments.)

The first responder at the operational level shall be able to perform the following tasks:

1. Analyze a hazardous materials incident to determine the magnitude of the problem in terms of outcomes by completing the following tasks:
  - a. Survey the hazardous materials incident to identify the containers and materials involved, determine whether hazardous materials have been released, and evaluate the surrounding conditions
  - b. Collect hazard and response information from MSDS; CHEMTREC/CANUTEC/SETIQ; local, state, and federal authorities; and shipper/manufacturer contacts
  - c. Predict the likely behavior of a material as well as its container
  - d. Estimate the potential harm at a hazardous materials incident

2. Plan an initial response within the capabilities and competencies of available personnel, personal protective equipment, and control equipment by completing the following tasks:
  - a. Describe the response objectives for hazardous materials incidents
  - b. Describe the defensive options available for a given response objective
  - c. Determine whether the personal protective equipment provided is appropriate for implementing each defensive option
  - d. Identify the emergency decontamination procedures
3. Implement the planned response to favorably change the outcomes consistent with the local emergency response plan and the organization's standard operating procedures by completing the following tasks:
  - a. Establish and enforce scene control procedures including control zones, emergency decontamination, and communications
  - b. Initiate an incident management system (IMS) for hazardous materials incidents
  - c. Don, work in, and doff personal protective equipment provided by the authority having jurisdiction
  - d. Perform defensive control functions identified in the plan of action
4. Evaluate the progress of the actions taken to ensure that the response objectives are being met safely, effectively, and efficiently by completing the following tasks:
  - a. Evaluate the status of the defensive actions taken in accomplishing the response objectives
  - b. Communicate the status of the planned response

**Hazardous Materials Technician:** Respond to a hazardous materials incident for the purpose of stopping the release. These individuals are often members of a Hazmat team.

A. NFPA 472 *Professional Competence of Responders to Hazardous Materials*

*Incidents* E.1.3 (Annex E) defines Hazardous Materials Technicians as "Those persons who respond to releases or potential releases of hazardous materials for the purpose of controlling the release. Hazardous materials technicians are expected to use specialized chemical protective clothing and specialized control equipment."

B. NFPA 472 *Professional Competence of Responders to Hazardous Materials*

*Incidents* identifies core competencies for responders trained to the technician level. In

addition to being competent at the first responder awareness and operations levels, the hazardous materials technician shall be able to perform the following tasks:

1. Analyzing a hazardous materials incident to determine the magnitude of the problem in terms of outcomes by completing the following tasks:
  - a. Survey the hazardous materials incident to identify special containers involved to identify or classify unknown materials, and to verify the presence and concentration of hazardous materials through the use of monitoring equipment.
  - b. Collect and interpret hazard and response information from printed resources, technical resources, computer data bases, and monitoring equipment.
  - c. Determine the extent of damage to containers.
  - d. Predict the likely behavior of released materials and their containers when multiple materials are involved.
  - e. Estimate the size of an endangered area using computer modeling, monitoring equipment, or specialists in this field.
2. Plan a response within the capabilities of available personnel, personal protective equipment, and control equipment by completing the following tasks:
  - a. Identify the response objectives for hazardous materials incidents.
  - b. Identify the potential action options available by response objective.
  - c. Select the personnel protective equipment required for a given action option.
  - d. Select the appropriate decontamination procedures.
  - e. Develop a plan of action, including safety considerations consistent with the local emergency response plan and the organization's standard operating procedures, and within the capability of the available personnel, personal protective

equipment, and control equipment.

3. Implement the planned response to favorably change the outcomes consistent with the organization's standard operating procedures and safety considerations by completing the following tasks:
  - a. Perform the duties of an assigned hazardous materials branch position within the local incident management system (IMS).
  - b. Don, work in, and doff personal protective clothing, including, but not limited to, both liquid splash and vapor-protective clothing with appropriate respiratory protection.
  - c. Perform the control functions identified in the plan of action.
4. Evaluate the progress of the planned response by evaluating the effectiveness of the control functions.
5. Terminate the incident by completing the following tasks:
  - a. Assist in the incident debriefing.
  - b. Assist in the incident critique.
  - c. Provide reports and documentation of the incident.

**Hazardous Materials Specialist:** Respond with and support hazardous materials technicians. Possess specialized knowledge of chemical hazards or container characteristics.

The Hazardous Materials Specialist is responsible for:

- Providing ongoing monitoring of local environmental conditions during task force operations.
- Providing an initial and ongoing survey for and identification of the presence of hazardous materials at search and rescue sites.
- Implementing defensive mitigation practices when indicated.
- Directing emergency decontamination procedures for any task force member or victim.

- Providing assistance to medical personnel for information regarding chemical exposure and injuries.
- Documenting all related information.
- Adhering to all safety procedures.
- Accountability, maintenance, and minor repairs for all issued equipment.
- Performing additional tasks or duties as assigned during a mission.
- Ensuring MSDS are provided for all hazardous materials carried or used by the task force.
- Ensuring all specialized equipment is maintained and calibrated according to the manufacturers specifications.

**On-Scene Incident Commander:** Assume control of the incident beyond the first responder awareness level. This individual must possess minimum training at the first responder operations level with additional knowledge of state, local, and federal response plans.

In addition to being competent at the awareness and operational levels, the incident commander shall be able to perform the following tasks:

1. Analyze a hazardous materials incident to determine the magnitude of the problem in terms of outcomes by completing the following tasks:
  - a. Collect and interpret hazard and response information from printed resources, technical resources, computer databases, and monitoring equipment
  - b. Estimate the potential outcomes within the endangered area at a hazardous materials incident
2. Plan response operations within the capabilities and competencies of available personnel, personal protective equipment, and control equipment by completing the following tasks:
  - a. Identify the response objectives for hazardous materials incidents
  - b. Identify the potential action options (defensive, offensive, and nonintervention) available by response objective
  - c. Approve the level of personal protective equipment required for a given action option

- d. Develop a plan of action, including safety considerations, consistent with the local emergency response plan and the organization's standard operating procedures and within the capability of available personnel, personal protective equipment, and control equipment
- 3. Implement a response to favorably change the outcome consistent with the local emergency response plan and the organization's standard operating procedures by completing the following tasks:
  - a. Implement an incident management system, including the specified procedures for notification and utilization of nonlocal resources (e.g., private, state, and federal government personnel)
  - b. Direct resources (private, governmental, and others) with expected task assignments and on-scene activities and provide management overview, technical review, and logistical support to private and governmental sector personnel
  - c. Provide a focal point for information transfer to media and local elected officials through the incident management system structure
- 4. Evaluate the progress of the planned response to ensure the response objectives are being met safely, effectively, and efficiently and adjust the plan of action accordingly by evaluating the effectiveness of the control functions
- 5. Terminate the incident by completing the following tasks:
  - a. Transfer command (control) when appropriate
  - b. Conduct an incident debriefing
  - c. Conduct a multi-agency critique
  - d. Report and document the hazardous materials incident and submit the report to the designated entity

## **5.2 Appropriate (Defensive) Actions during Hazardous Materials Incidents:**