Competency-Based HazMat / WMD Training: Facts, Fictions and Realities

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Session Objectives

1. Discuss the relationship between response problems and scenarios, desired operational capabilities, and the required training competencies to achieve that capability.

2. Provide an overview of, and the relationship between:
   - National Planning Scenarios
   - Target Capabilities List (TCL)
   - NIMS Resource Typing Standards and Training Requirements
Session Objectives

3. Define the following terms and their relationship to competency-based training:
   - Competence
   - Certification
   - Accreditation
   - Credentialing

4. Describe the differences between OSHA 1910.120 (q) and NFPA 472 as a tool for delivering a competency-based HM/WMD response training program

5. Provide a forum for discussion.
RESPONSE PROBLEM

SOLUTIONS
Objectives → Missions → Tasks

RESOURCES
Operational Capability

Necessary Equipment
- Resource Typing Definitions
- HMRT

Competent Personnel
- OSHA 1910.120(q)
- NFPA 472 / 473
- NIMS Position Specific Guidance

Concept of Operations
- NIMS-Based
- Local
- Regional
- State
- Federal
Putting the Pieces Together…

Response Problem → Solutions → Resources → National Planning Scenarios

Solutions:
- Objectives → Missions → Tasks

Resources:
- Operational Capability
- Equipment / Personnel / Con Ops

Target Capabilities List (37):
- Resource Typing
- Training Standards
- NIMS / ICS
National Planning Scenarios

♦ Consists of 15 “all hazard” scenarios
♦ HM/WMD related scenarios include:
  • Bio Attack - Aerosol Anthrax, Plaque
  • Chemical Attacks - Blister, Nerve Agent, TIC, Chlorine
  • Radiological Dispersal Device (RDD)
  • IED Bombing
  • Bio - Foot and Mouth Disease
Target Capabilities List

- National Priority - Strengthen CBRNE Detection, Response and Decon Capabilities
  - WMD/HM Rescue and Decontamination
  - CBRNE Detection
  - Responder Safety and Health
  - Environmental Health
A jurisdiction’s class determines which performance objectives it needs to meet.

Performance objectives outline the level of capability required for each performance class.

The Capability Elements chart lists the resources that are necessary to achieve the performance objectives.
HazMat Response Resources

- Haz Mat Response Team (HMRT) is only HM/WMD typed resource
  - Previously typed as a HM Entry Team
  - Currently in draft and will be available for public comment in early 2009
- Do not confuse HMRT as a resource vs. number of personnel and resources required for a major HM/WMD incident
HM/WMD Training Standards

- Personnel responding with a typed resource must be trained to provide the requested operational capability.
- DHS has formally adopted NFPA 472 and NFPA 473 as the basis for HM/WMD response training (September 2008).
- Typing Standard Draft Training Rqmnts
  - OSHA 1910.120 (q) AND NFPA 472
Understanding Terminology

Competent / Competency

♦ Requisite *skills* and *knowledge* required to perform expected tasks to complete the desired outcome (i.e., mission).

♦ Source of HM/WMD response competencies:
  • OSHA / EPA / state regulations (“The Law”)
  • NFPA HM/WMD Competency Standards
  • NFPA Firefighter Pro Qual Standards
  • DHS Universal Task List (UTL)
Certification

- Organization, agency or third party determines “you are competent” against some predefined criteria or standard.

- Advantages

- Limitations
Understanding Terminology

Certification vs. Accreditation

- Who is the Certifying Agency / Organization?
  - OSHA 1910.120 (q) = the Employer
  - NFPA and Others = 3rd Party Organization

- What attests to the objectivity / process of the certifying agency?
  - Who / how is the Certifying Agency accredited?

- What is the standard / basis upon which the certification is provided?
Understanding Terminology

Credentialing Defined

♦ Objective evaluation and documentation of a person’s current licensure, training or experience, competence or certification, AND

♦ Ability to meet a nationally accepted minimum standard to provide a service or function during an incident.
Understanding Terminology

Credentialing Observations

- Credentialing refers to the info a person will present to the requesting jurisdiction
  - Identity, Qualification / Affiliation & Authorization
  - Only applies to personnel and teams engaged in interstate mutual aid
  - Tough to achieve credentialing without certification

- Examples - NWCG Redcard, NIMS Qual Card (TBD), Company Qualification Card
OSHA is Law
NFPA 472 is a voluntary consensus standard
If you meet NFPA 472, you will satisfy the OSHA 1910.120(q) training requirements.
Observations

♦ The question is not the OSHA “level of responder” but are personnel trained to perform their expected mission and tasks
  • 1910.120 (q)(6) - Personnel MUST be trained to perform their expected tasks and duties
♦ Regulatory compliant does not equal operational effectiveness
Observations

- Response threats and risks are constantly changing and evolving
  - OSHA 1910.120 - Interim 1986 / Final 1989
  - Regulatory process vs. voluntary consensus standards process

- CPL 02-02-073 “Inspection Procedures for 29 CFR 1910.120 (q)” released 8/27/07

- HAZWOPER Interpretative Quips (on-line)
Future regulatory action on OSHA 1910.120?

Bottom Line: NFPA 472 is the training baseline for response assets delivering interstate mutual aid
1. Makes the Standard more adaptable for ALL response disciplines.
2. Provides a competency-based process so that AHJ can ensure responders are trained to perform expected tasks.
3. Provides a vehicle by which AHJ meets OSHA 1910.120 (q)(6).
   • “Training shall be based on the duties and function to be performed by each responder of an emergency response organization.”
NFPA 472 (2008) Overview

- Combines HM & WMD competencies into one document.
- Individual competencies not significantly changed
- Majority of changes are at FRO level and facilitate adoption by other response disciplines
  - Responders are Operations level, regardless of response discipline
    - Core FRO Competencies
    - Mission-Specific Competencies
  - No major changes for fire service curriculums accredited to NFPA 472 (2002) edition
NFPA 472 (2008) Overview

- Standard does not address hospital personnel; guidance can be referenced at:
  - ASTM Standard for Hospital Preparedness (ASTM E2413)
  - OSHA First Receivers guidance document
  - OSHA Hazwoper website

- EMS competencies remain in NFPA 473.
  - Now on same revision cycle as NFPA 472

- Underlying philosophy directed towards “risk-based” response.
NFPA 472 (2008) Overview

Origin and Development Section

♦ O & D lays out the scope and application of the document. Key points:
  • Applies to ALL personnel who respond to the emergency phase of HM/WMD incidents.
  • If you are a “player,” you are covered by Standard.
  • Scope only applies to individuals involved in the delivery of on-scene emergency services.
Awareness Level Personnel

Definition

♦ Those persons who, in the course of their normal duties, could be the first on the scene of an emergency involving a hazardous materials/weapon of mass destruction and who are expected to:
  • Recognize the presence of HM/WMD;
  • Protect themselves;
  • Call for trained personnel, and
  • Secure the area.
Awareness Level Personnel

Changes

♦ Term “responder” has been dropped.
♦ Individuals who, in the course of their duties, may be first on-scene.
♦ Competencies are essentially comparable to OSHA Hazard Communication requirements (OSHA 1910.1200).
**Operations Level Responder**

**Definition**

- Those persons who respond to releases or potential releases of a hazardous material/WMD as part of the response to the incident for the purpose of protecting nearby persons, the environment, or property from the effects of the release.

- These persons may have additional competencies that are specific to their response mission, expected tasks, equipment and training as determined by the AHJ.
Operations Level Responder

Changes

♦ If you are *tasked* to respond to the scene of a HM/WMD incident (i.e., player vs. support), you are an Operations-level responder

♦ Represents the MOST significant change to NFPA 472
Operations Level Responder

Changes

♦ Operations-level competencies are divided into:
  • Core competencies
  • Mission-specific competencies
  • Agent-specific competencies (Annex)
Core Competencies

- The knowledge, skills and judgment needed by all Operations Level Responders who may respond to releases or potential releases of a hazardous material/WMD.
- NFPA 472-2002 competencies minus Product Control, PPE and some decon competencies.
  - Trained to use PPE provided by the AHJ
  - Capable of implementing emergency decon
  - All Product Control competencies re-classified as mission-specific competencies.
Operations Level Responder

Mission-Specific Competencies

- The knowledge, skills and judgment needed by Operations Level Responders who have completed the requisite core competencies and who are designated by the AHJ to perform mission specific tasks.

- These are determined based upon duties as assigned by the AHJ (i.e., local needs).
Operations Level Responder

Mission-Specific Competencies

1. Use Personal Protective Clothing
   • Baseline for all other mission-specific comps

2. Perform Technical Decontamination
   • Baseline for all other mission-specific comps

3. Perform Mass Decontamination
   • Decon Companies / Decon Strike Teams

4. Perform Product Control Measures
   • Defensive spill control & limited offensive firefighting for flammable liquids / gases
Operations Level Responder

Mission-Specific Competencies

5. Perform Air Monitoring and Sampling
   • As provided by AHJ

6. Perform Victim Rescue and Removal
   • E.g., Chemical Rescue Companies

7. Evidence Preservation and Sampling

8. Illicit Laboratories Incident Response
Operations Level Responder

What tasks will you perform at a HM/WMD incident?

- Decon (Technical or Mass)
- Use of PPE
- Air Monitoring
- Illicit Labs
- Product Control
- Victim Rescue & Removal
- Operations Core (ALL)
# NFPA 472

## OPERATIONS-LEVEL RESPONDER MATRIX

**Scope:** This matrix is designed to help users of this Standard determine which competencies contained in Chapters 5, 6 and 7 should be utilized to ensure that responders have the appropriate knowledge and skills to perform their expected tasks. The selection of competencies should always be based upon the expected mission and tasks, as assigned by the AHJ.

<table>
<thead>
<tr>
<th>EXAMPLES OF EXPECTED MISSION AND TASKS</th>
<th>USE PPE</th>
<th>PERFORM TECHNICAL OR MASS DECON *</th>
<th>PERFORM PRODUCT CONTROL</th>
<th>PERFORM AIR MONITORING</th>
<th>PERFORM VICTIM RESCUE &amp; REMOVAL</th>
<th>EVIDENCE PROSRVTION &amp; SAMPLING</th>
<th>ILLICIT LAB INCIDENT RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firefighters expected to perform basic defensive product control measures</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>Emergency responders assigned to a Decon Company or Decon Strike Force</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Emergency responders assigned to a unit tasked with providing rapid rescue and extraction from a contaminated environment</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency responders assigned to provide staffing or support to a Hazardous Materials Response Team</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
<tr>
<td>Law enforcement personnel involved in investigation of criminal events where hazardous materials are present</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Law enforcement personnel involved in investigation of incidents involving illicit laboratories</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Public Health personnel involved in the investigation of public health emergencies</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Environmental Health and Safety Professionals who provide air monitoring support.</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
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</tr>
</tbody>
</table>

* - The scope of the decontamination competencies would be based upon whether the mission involves the responder being the “customer” of the decon services being provided, or is part of those responders who are responsible for the set-up and implementation of the decon operation.
Operations Level Responder

Mission-Specific Competencies

- Competencies shall be performed under the guidance of either:
  - HazMat Technician
  - Allied Professional
  - Written SOP’s as determined by AHJ

- Mission-specific competencies are packaged in a common chapter (Chapter 6).
Operations Level Responder

Allied Professional Definition

♦ That person who possesses the knowledge, skills and technical competence to provide assistance in the selection, implementation and evaluation of mission specific tasks at a hazardous materials/WMD incident.

• Certified Industrial Hygienist (CIH)
• Certified Safety Professional (CSP)
• Certified Health Physicist (CHP)
• Other similar credentialed or competent individuals as determined by the AHJ.
Operations Level Responder

EMS Personnel (NFPA 473)

♦ Dropping previous EMS/HM Level I and II
♦ EMS personnel must meet NFPA 472 core competency requirements
♦ Mission-specific competencies changed to follow EMS structure
  • Basic Life Support (BLS) personnel
  • Advanced Life Support (ALS) personnel
**HazMat Technician**

**Definition**

♦ Person who responds to releases or potential releases of a hazardous materials/WMD and has the competence to:
  - Analyze a problem involving HM/WMD using a risk-based response process
  - Select the appropriate decon procedures, and
  - Control a release using specialized protective clothing and control equipment.

♦ These persons may have additional competencies specific to their response mission, expected tasks, equipment and training as determined by the AHJ.
**HazMat Technician**

**Risk-Based Response**

- A systematic process by which responders analyze a problem involving HM/WMD, assess the hazards, evaluate the risks, and determine appropriate response actions based upon facts, science, and the circumstances of the incident.
Revisions

- Some basic analysis competencies have moved from HMT to FRO (Core)
- Monitoring & detection competencies focus upon technologies rather than types
- Decon competencies expanded:
  - Technical decon supporting entry operations
  - Technical decon and mass decon operations involving ambulatory and non-ambulatory victims
**Definition**

♦ Organized group of trained response personnel operating under an emergency response plan and appropriate standard operating procedures who perform Technician-level skills at hazardous materials/WMD incidents.

♦ **Justification**: Reflects that HMRT’s are tasked to perform Technician-level skills & competencies.
**HazMat Officer**

**Definition**
- The person who is responsible for directing and coordinating all hazardous materials/WMD operations as assigned by the incident commander.
  - Under NIMS, identified as HazMat Group Supervisor or HazMat Branch Director.

**Justification:** Recognizes that there are now numerous disciplines who are required to have the skills / competencies of the HM Officer
  - May also function as an Advisor or Tech Specialist
HazMat Safety Officer

Comments

♦ The person who works within an incident management system (IMS) to ensure that recognized HM/WMD safe practices are followed. Under NIMS, this person may be identified as the Assistant Safety Officer – Hazardous Materials.

♦ Justification: Recognize that there may be some conflicts with fire service terminology re: ISO. Recommended change is consistent with the Hazmat Officer proposal.
Fire Service Certification

- Current fire service FRO certification programs should not significantly change
- Results of the NFPA 472 / 1001 Working Group
  - NFPA 472 TIA
  - NFPA 1001 TIA
  - Job Performance Review (JPR) integration into next 1001 edition
Summary of NFPA 472 Changes

♦ Standard better reflects competencies for all responders to HM/WMD incidents.
♦ Standard integrates WMD issues.
♦ Awareness level personnel no longer viewed as emergency responders.
♦ Operations-level personnel can be trained in mission-specific tasks without being fully trained to the HazMat Technician level.
♦ No major changes to other training levels.
Chief John M. Eversole

♦ Chief of Special Functions (ret) - Chicago FD
♦ Original member and former chair - NFPA 472
♦ IAFC Hazmat Committee Lifetime Achievement Award in John’s name
♦ “…It ain’t shit if it doesn’t work on the street.”
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QUESTIONS?