Hazardous Materials: Managing the Incident

CHAPTER 9
Information Management and Resource Coordination
Learning Objectives Overview

- Knowledge Objectives
- Skills Objectives
• Information management and resource coordination focuses on making sure that:
  – Information flows to the agencies and people that need to know what is going on.
  – Everyone involved in the incident knows what the incident action plan (IAP) is.
  – Emergency responders have the right resources.
• Main points
  – Responder safety is jeopardized if the right information and resources are not available at the right time.
  – Effective coordination requires an incident management organization be in place.
  – Poorly coordinated information can politically damage the IC’s credibility.
  – The IC’s IAP must have a solid technical basis.
Managing Information in the Field (1 of 3)

• The basics
  – Decisions require reliable information.
  – Reliability depends on the quality of data and facts.
  – Data + Facts = Information
Managing Information in the Field (2 of 3)

• The data
  – Chemical and physical properties of the material

• Common data mistakes
  – Looking up the wrong chemical
  – Failure to correctly copy down information
  – Failure to validate information with multiple references
Managing Information in the Field (3 of 3)

- The facts
  - Statements or observations about something verified and validated as true
  - Facts are typically based on objective observations made by trained and experienced personnel.
When dealing with information management requirements, important decisions that must be made include:

- What type of information will be needed
- What the priority of the information needed is
- How the information will be stored for quick recovery
- Will information and retrieval systems work in the field
Information management must begin well before the incident with some important decisions concerning the type of information needed and how it will be stored and retrieved.
What Do You Really Need to Know? (1 of 2)

• Need-to-know information includes:
  – What are the hazards or how will they hurt me?
  – What must I do to protect myself?
    • For example, PPE
  – What are the health risks?
  – What is the container type and condition?
  – What are the initial tactical recommendations?
  – What type of decontamination procedures and methods will be required?
What Do You Really Need to Know? (2 of 2)

• Four basic groups of information sources:
  – Facility emergency response plans
  – Pre-incident tactical plans
  – Published emergency response references
  – Shipping documents
Facility Emergency Response Plans

- The hazard analysis section:
  - Identifies special problems
  - Potential risks and consequences
  - Available emergency response resources in the facility or community

- An emergency response plan is a good beginning point to identify target hazards needing pre-incident planning.
Preplans focus on a specific problem or location.

May concentrate on a particular process or tank(s)

For larger facilities and jurisdictions, prioritizing problem areas is based on the hazard analysis process.
• Criteria for developing special preplans for fixed facilities with chemical manufacturing operations may include the following:
  – Type of hazards and risks present
  – Critical infrastructure
  – Economically sensitive sites
  – Environmentally sensitive exposures
  – Unusual or poor water supply requirements
  – Requirements for large quantities of foam
  – Poor accessibility
• Bigger is not necessarily better.
• *NFPA 1620*—Standard for Pre-Incident Planning provides guidance.
• Should include a simple plot plan
• In the wrong hand, preplanning information could be used by criminals or terrorists.
Pre-plans can provide valuable information at the emergency scene that can assist the IC in developing an incident action plan.
Emergency Response

References

- References are generally divided into the following categories:
  - Reference manuals and guidebooks
  - Technical information centers accessible by telephone
  - Hazardous materials databases
Information Storage and Recovery

- Portable computer systems
- Mobile communications
- Books work the first time, every time.
- "Acid test" for information management systems: "Will it work on the street?"
• Evaluation criteria for information systems:
  – User friendly
  – Durability

• Remember, a computer’s outstanding attributes and the ability to process complex logical instructions are of no value unless they are applied within a good management process.
Coordinating Information Among the Players

• The larger and more complex the incident, the larger the command organization needed to manage the incident.
• The larger the command organization, the more need there is for a formal structure to manage the data and facts.
• Information must also flow freely.
Hazmat Group Functions
(1 of 2)

• Primary functions
  – Safety function
  – Entry/backup function
  – Decontamination function
  – Site access control function
  – Information/research function
Hazmat Group Functions
(2 of 2)

• Secondary functions
  – Medical function
  – Resource function
The checklist system is a simple and reliable method of coordinating information.

Checklist systems include:
- Stand-alone worksheets
- Job aid in a field operations guide (FOG)
• Formal checklists advantages:
  – Checklists don’t panic.
  – Checklists have institutional memory.
  – Checklists identify assigned tasks.
  – Checklists list critical activities and action items.
  – Checklists prioritize actions.
  – Checklists provide a framework for development of the IAP.
Checklist System
(3 of 4)

• For the checklist system to be effective, checklists must be updated on a regular basis.
• It is important that responders take ownership of the checklists and make gradual improvements to the system over time.
### MEDICAL WORKSHEET

**TACTICAL GOALS**

- INCIDENT ALARM #: 
- DATE: 
- TIME ESTABLISHED: 
- INCIDENT ADDRESS: 
- RADIO: MEDICAL 
- TIME TERMINATED: 
- Ops Period

**ENTRY TEAM SUPPORT**

<table>
<thead>
<tr>
<th>TEAM</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TASKS**

- Medical Monitoring of entry and back-up personnel
- All personnel items removed, tagged and secured
- Suit Selection double checked with Information
- Protective Clothing: 
- Visual Check of Entry Suit
  - All zippers and closures properly secured
  - No obvious suit damage
  - Communication check (Channel: ________)
- Respiratory Protection: 
  - Facepiece seal insured
  - Air Pressure verified
- Gloves: 
  - Gloving, Overgloving, Doubleglove verified
- Boots: 
  - Footwear verified as appropriate
- Entry Officer notified that teams are ready
  - Chemical

**Initial Entry Physical**

- Suit Numbers
  - TEAM A
  - TEAM B
  - TEAM C

**Respiratory Protection Numbers**

- TEAM A
- TEAM B
- TEAM C

---

Field Operations Guide Checklist

---

Copyright © 2014 by Jones & Bartlett Learning, LLC, an Ascend Learning Company | www.jblearning.com
Hazmat Information Leader

• Plays a key role in the successful mitigation of any hazmat incident
• Chosen because of ability to:
  – Communicate
  – Comprehend and manage information
  – Work effectively under stress
  – Coordinate activities
Extended incidents or incidents involving multiple chemicals may require that an information unit be formed to divide the workload.

Hazmat information function may need to move to nearby offices or houses.
Issues of concern to our governing bodies include:

- Effects on public safety and health
- Disruption of transportation systems
- Impact on infrastructure
- Financial costs
• Communications architecture that supports situational awareness among government agencies includes:
  – Common communications plans
  – Interoperable communications equipment
  – Standard operating procedures
• Unified Command is responsible for providing regular and factual situation status reports to the EOC.
Coordinating Information  (3 of 5)

• EOC is responsible for assembling a common operating picture (COP).
• The COP provides an overview of the incident by collecting and collating information.
• A COP helps policymakers make consistent and timely decisions.
Coordinating Information (4 of 5)

• Liaison officer
  – Ensures that incident-specific external information, issues, and concerns flow both into and out of the response organization.
  – Point of contact for representatives of government agencies and non-governmental organizations (NGOs)
Within the National Incident Management System (NIMS), external agencies may fall into the following categories:

- Assisting agency
- Cooperating agency
- NGO
During a major emergency, the news media is the major communicator.
Informing the news media is a critical task.
Done well, the public stays informed and is safer.
Done poorly, problems can have a lasting impact on the credibility of emergency responders.
• The public information officer (PIO) is responsible for:
  – Gathering information
  – Verifying information
  – Coordinating information
  – Disseminating information
Public Information
(3 of 5)

• Scope of public information usually includes:
  – Incident cause
  – Size of the spill or release
  – Hazardous materials involved
  – Information concerning potential safety, security, and health impacts
  – Current situation
  – Resources committed
  – Estimated time to resolve the problem
A joint information center (JIC) may be established to manage the expanding information requirements.

- Typically staffed by information management specialists
- Established at a single, on-scene location
- Federal, state, and local agencies represented
The typical JIC is responsible for:

- Ensuring consistent messages to the public are delivered
- Releasing information that is accurate and not conflicting
- Screening for incident-sensitive information
- Ensuring good OPSEC and protecting critical information
Human Resources

• Human resources include:
  – Emergency responders
  – Technical specialists
  – Product or container specialists
  – Support personnel

• People also represent the greatest financial, legal, political, and technical exposure for the IC.
Equipment Resources (1 of 2)

• Reusable equipment resources are items that include:
  – Hand tools
  – Generators
  – Pumps
  – Monitoring instruments
  – Fire apparatus
• Hazmat equipment can represent a substantial cost outlay.
Supply Resources

• Supply resources are usually considered expendable.

• Examples include:
  – Foam concentrate
  – Decon solutions
  – Limited-use protective clothing
  – Absorbent pads
  – Calorimetric tubes
  – Medical supplies
Coordinating Resources  (1 of 2)

• Hazardous materials incidents involve a broad spectrum of private and public services.

• Examples for a train derailment may include:
  – Railroad operations and hazmat specialists
  – Product and/or container specialists representing a variety of different companies
  – Wreck-clearing contractors
  – Environmental specialists and contractors
Examples for a train derailment may include:

- Fire fighters, police, EMS, and rescue personnel
- State and county emergency management
- Local, state, and federal environmental officials
- National Transportation Safety Board (NTSB) investigators
- Federal Railroad Administration (FRA) inspectors
- Transportation Security Administration (TSA) security specialists
Internal Resource Coordination

- Special resource requirements are funneled to the logistics section.
- Within the ICS organization, resources are coordinated and tracked by the resource unit within the planning section.
- There must be close coordination between the planning and logistics section chiefs.
• Outside agencies must be coordinated through a single on-scene command organization.
• Assisting agencies will initially be coordinated through the liaison officer.
Items addressed by the IC or liaison officer during agency check-in process include:

- Making sure all players understand the ICS structure
- Determining operational role of a particular agency or organization
- Physically identifying each agency or organization representative
- Establishing the ground rules for safety and accountability
Most resource coordination problems fall into four categories:

- Failure to understand or work within the incident command structure
- Failure to anticipate potential problems, as well as gaps in information or resources
- Inadequate training
- Communication and personality problems between players
• Some useful techniques that can be effectively applied by the IC in stressful situations include:
  – Listening
  – Clarifying
  – Summarizing
  – Empathizing
• Failure to manage information can jeopardize safety and success of the emergency response effort.
• The perception of how the incident was handled generally depends how information was managed.
• Information and resources must be managed within the ICS framework.
• If it doesn’t work on the street, it is useless.
• Coordinating information in the field becomes particularly important when evaluating options concerning protective clothing, decon requirements, and public protective actions.
• The larger and more complex the incident, the larger the command organization needed to manage the incident.
• The larger the command organization, the more need there is for a formal structure to manage the data and information.

• Information must also flow freely to and from the incident scene.

• In addition, accurate and timely information to the public and the media must be well managed.
• The checklist system is one of the most effective tools for ensuring that information and resources are effectively coordinated.

• An information unit may need to be formed within the hazmat group.

• Resources are the people, equipment, and supplies required to manage a hazardous materials emergency.
• The logistics section is typically organized into two subgroups: resources branch and support branch.

• A good logistics section chief anticipates what will be needed.

• Coordinating resource requirements can be an easy process if your organization understands and regularly operates within the requirements of the NIMS.