

INCIDENT COMMAND

INSTRUCTIONAL GOAL:

Upon completion of this topic, the student will understand the purpose of, and be able to function under, an Incident Command System.

ENABLING OBJECTIVES

Based on the information presented in the classroom and in the student guide, the student will be able to:

1. Describe the functions of the Incident Command System.
2. Identify the Strategic Goals
3. Explain the Command Function.
4. Complete needed documentation.

OVERVIEW

The Incident Command System provides a clear structure for the diverse activities necessary to successfully control a hazardous materials incident. The key element of any Incident Command model is that there is a single person in charge of the incident. And, that this person is responsible for the overall command of the incident and the establishment of the goals and objectives at the scene. This allows the efficient utilization of all resources when dealing with an emergency while performing the response in a controlled and well-organized manner. Finally, the risks to Team Members and other personnel are minimized when the Incident Command System is in place.

Liability Issues

Effective response to emergencies and disasters is becoming increasingly complex. Those involved in preparing for a responding to emergencies caused by natural or manmade events, or even terrorists attacks, are expected to understand complicated weather patterns, human behavior, chemicals, computers, transportation systems, laws, and agency regulations.

Public, private, and nonprofit managers and employees, as well as volunteers have become increasingly aware that legal issues have an impact on emergency management. All parties involved are concerned with their liability as they prepare for and are called on to respond.

State and federal laws provides means for filling claims against governmental agencies (local, state, federal), businesses, and their employees for injuries resulting from actions taken in preparation for and in response to emergency. The law includes state and federal statute, constitutional provisions, and court decisions.

Although complex, the law is based on principles that clarify individual responsibilities and rights. With an understanding of potential liability problems, those involved in emergency management can seek guidance from legal counsel on how to avoid for minimize exposure.

Sovereign immunity

Under the principal of sovereign immunity, individuals harmed by the action of a governmental unit are prohibited from receiving damages from the state or its political subdivisions unless the governmental unit agrees to pay the claim. Over the years states have abolished sovereign immunity. Each state defines the extent of liability, so immunity may be retained, abolished, or adapted.

State law may provide immunity provisions in one or more ways.

- State tort act
- State emergency management act
- Discretionary immunity
- Governmental/ proprietary immunity
- Public safety provisions for officials such as firefighters an police personnel

Immunity may be lost by:

- Gross negligence
- Intentional misconduct (malfeasance)
- No immunity for private contractors
- No immunity for those responsible for the incident

Tort

A tort is an act that harms another. It has been committed when a person commits an act or fails to act, without right, and as a result another is harmed, directly or indirectly. A tort may lead to a civil action for personal injuries or property damage. Torts include intentional acts, negligence, and strict or absolute liability.

A civil action provides a means for a person harmed by another to be compensated for personal loss. Many feel that individuals harmed by a public unit should to some degree be compensated, and a civil action provides a basis for distributing liability.

Negligence

Negligence is the unintentional invasion of a person's interest that is protected by law, where the actor is at fault, and where the actor's conduct is the legal cause of the injury suffered. Injury to another does not establish liability, per se. A person owes a duty to another to exercise care. Governmental units and employees are most often sued for damages for alleged negligence.

Negligence has the following common elements. The absence of proof of any one element will defeat a finding of liability.

- The existence of a duty, recognized by law, for the person to conform to the standard of care, defined by common law (based upon judicial decisions) or by statute.
- A failure to conform to that standard of care, or to carry out the duty.
- A causal connection between the act of the wrongdoer (his or her negligence) and a resulting injury to a third party (ies).
- Actual loss or damage to the injured party (ies).

Liability

Liability is the state of being liable or legally responsible for something one should do or avoid. There are different kinds of liability. The first is vicarious liability and the second is individual liability.

Vicarious liability - Company ('s) could be liable for the negligent acts or omissions of its employees, acting within the scope of their duties. The liability for the employee's actions is passed on to the employer. In cases presented, the employer may be vicariously liable for an employee's negligence.

Individual liability - Company ('s) may not be liable for an employee's actions if the employee acts outside the scope of his or her duties. Acts with malice, or acts with reckless disregard for the rights of others. Under these circumstances, the employee may be individually liable.

Codes and Regulations

Identify applicable Federal, State and local regulations such as:

Occupational safety and health regulations (OHSA) 29CFR1910.120
Environmental regulations (EPA) 40CFR311
Transportation regulations (DOT)
Corporate policies

PLANNING

What Is an Emergency?

An emergency is any unplanned event that can cause deaths or significant injuries to employees, customers or the public; or that can shut down your business, disrupts operations, cause physical or environmental damage, or threaten the facility's financial standing or public image. Obviously, numerous events can be "emergencies,"

What Is Emergency Management?

Emergency management is the process of preparing for, mitigating, responding to and recovering from an emergency.

Emergency management is a dynamic process. Planning, though critical, is not the only component. Training, conducting drills, testing equipment and coordinating activities with the community is other important functions.

To be successful, emergency management requires upper management support. The chief executive sets the tone by authorizing planning to take place and directing senior management to get involved.

THE PLANNING PROCESS

Establish a Planning Team
Analyze Capabilities and Hazards
Develop the Plan
Implement the Plan

ESTABLISH A PLANNING TEAM.

There must be an individual or group in charge of developing the emergency management plan. The size of the planning team will depend on the facility's operations, requirements and resources. Usually involving a group of people is best because:

It encourages participation and get more people invested in the process.
It increases the amount of time and energy participants are able to give.
It enhances the visibility and stature of the planning process.

It provides for a broad perspective on the issues.

Determine who can be an active member and who can serve in an advisory capacity. In most cases, one or two people will be doing the bulk of the work. At the very least, you should obtain input from all functional areas. Remember:

- a. Upper management
- b. Line management
- c. Labor
- d. Human Resources
- e. Engineering and maintenance
- f. Safety, health and environmental affairs
- g. Public information officer
- h. Security
- i. Community relations
- j. Sales and marketing
- k. Legal
- L. Finance and purchasing

Establish authority demonstrate management's commitment and promote an atmosphere of cooperation by "authorizing" the planning group to take the steps necessary to develop a plan. The chief executive or the plant manager should lead the group. Establish a clear line of authority between group members and the group leader, though not so rigid as to prevent the free flow of ideas.

Define the purpose of the plan and indicate that it will involve the entire organization
Define the authority and structure of the planning group

Establish a Schedule and Budget Establish a work schedule and planning deadlines.
Timelines can be modified as priorities become more clearly defined.

Develop an initial budget for such things as research, printing, seminars, consulting services and other expenses that may be necessary during the development process.

ANALYZE CAPABILITIES AND HAZARDS.

This entails gathering information about current capabilities and about possible hazards and emergencies then conduct Pre-Planning analysis to determine the facility's capabilities for handling emergencies.

- Review Internal Plans and Policies
- Meet with government agencies, community organizations and utilities. Ask about potential emergencies and about plans and available resources for responding to them. Sources of information include:

Hazard Analysis

A critical element of hazardous material incident planning is Hazard analysis. The information gather provides a factual basic to set priorities for planning. Also, it provides the documentation for supporting hazardous material planning and response efforts.

The three steps used in this process- hazard identification, vulnerability analysis, and risk analysis Have different meanings but sometimes are wrongly used interchangeably.

- Hazard identification – The identification of what hazardous materials are found in facilities with the **POTENTIAL** for causing injury to life, or damage to environment and property.
- Vulnerability analysis - The **SUSCEPTIBILITY** of life, property, and environment to injury or damage if a hazardous material reaches it's full potential.
- Risk analysis – The **PROBABILITY** that injury to life or damage to the environment, and property will occur if a Hazardous materials releases it's full potential.

Identify Critical Products, Services and Operations

You'll need this information to assess the impact of potential emergencies and to determine the need for backup systems. Areas to review include:

Company products and services and the facilities and equipment needed to produce them

Products and services provided by suppliers, especially sole source vendors

Lifeline services such as electrical power, water, sewer, gas, telecommunications and transportation

Operations, equipment and personnel vital to the continued functioning of the facility

Identify Internal Resources and Capabilities

Resources and capabilities that could be needed in an emergency include:

Personnel -- fire brigade, hazardous materials response team, emergency medical services, security, emergency management group, evacuation team, public information officer

Equipment -- fire protection and suppression equipment, communications equipment, first aid supplies, emergency supplies, warning systems, emergency power equipment, decontamination equipment

Facilities -- emergency operating center, media briefing area, shelter areas, first-aid stations, sanitation facilities

Organizational capabilities -- training, evacuation plan, employee support system

Backup systems – arrangements with other facilities to provide assistance.

Identify External Resources

There are many external resources that could be needed in an emergency. In some cases, formal agreements may be necessary to define the facility's relationship with the following:

Local emergency management office

Fire Department

Hazardous materials response organization

Emergency medical services

Hospitals

Local and State police

Community service organizations

Utilities

Contractors

Suppliers of emergency equipment

Insurance carriers

Conduct A Vulnerability Analysis or Pre-Planning Assessment

DEVELOP THE PLAN

Emergency Management Elements

This section of the plan briefly describes the facility's approach to the core elements of emergency management, which are:

Direction and control

Communications

Life safety

Property protection

Community outreach

Recovery and restoration

Administration and logistics.

Emergency Response Procedures

The procedures spell out how the facility will respond to emergencies. Whenever possible, develop them as a series of checklists that can be quickly accessed by senior management, department heads, response personnel and employees.

Determine what actions would be necessary to:

Assess the situation, Protect employees, customers, visitors, equipment, vital records and other assets to get the business back up and running. Specific procedures might be needed for any number of situations, for such functions as:

- Warning employees and customers
- Communicating with personnel and community responders
- Conducting an evacuation and accounting for all persons in the facility
- Managing response activities
- Activating and operating an emergency operation center
- Shutting down operations
- Protecting vital records
- Restoring operation

Support Documents

Documents that could be needed in an emergency include:

Emergency call lists -- lists (wallet sizes if possible) of all persons on and off site who would be involved in responding to an emergency, their responsibilities and their 24-hour telephone numbers

Building and site maps

Resource lists -- lists of major resources (equipment, supplies, and services) that could be needed in an emergency, mutual aid agreement with other companies and government agencies.

THE DEVELOPMENT PROCESS

Identify Challenges and Prioritize Activities

Determine specific goals and milestones. Make a list of tasks to be performed, by whom and when. Determine how you will address the problem areas and resource shortfalls that were identified in the vulnerability analysis.

Write the Plan

Assign each member of the planning group a section to write. Determine the most appropriate format for each section. Establish an aggressive timeline with specific goals. Provide enough time for completion of work, but not so much as to allow assignments to linger. Establish a schedule for:

- a. First draft
- b. Review
- c. Second draft
- d. Tabletop exercise
- e. Final draft
- f. Printing
- g. Distribution

Establish a Training Schedule

Have one person or department responsible for developing a training schedule for your facility.

Coordinate with Outside Organizations

Meet periodically with local government agencies and community organizations. Inform appropriate government agencies that you are creating an emergency management plan. While their official approval may not be required, they will likely have valuable insights and information to offer. Determine State and local requirements for reporting emergencies, and incorporate them into your procedures. Determine protocols for turning control of a response over to outside agencies. Some details that may need to be worked out are:

- a. Which gate or entrance will responding units use?
- b. Where and to whom will they report?
- c. How will they be identified?
- d. How will facility personnel communicate with outside responders?
- e. Who will be in charge of response activities?

Determine what kind of identification authorities will require allowing your key personnel into your facility during an emergency.

Maintain Contact with Other Corporate Offices

Communicate with other offices and divisions in your company to learn:

They're emergency notification requirements
The conditions where mutual assistance would be necessary
How offices will support each other in an emergency
Names, telephone numbers and pager numbers of key personnel

Incorporate this information into your procedures.

Review, Conduct Training and Revise

Distribute the first draft to group members for review. Revise as needed.

For a second review, conduct a tabletop exercise with management and personnel who have a key emergency management responsibility. In a conference room setting, describe an emergency scenario and have participants discuss their responsibilities and how they would react to the situation. Based on this discussion, identify areas of confusion and overlap, and modify the plan accordingly.

Distribute the Plan

Place the final plan in three-ring binders and number all copies and pages. Each individual who receives a copy should be required to sign for it and be responsible for posting subsequent changes.

Determine which sections of the plan would be appropriate to show to government agencies (some sections may refer to corporate secrets or include private listings of names, telephone numbers or radio frequencies). Distribute the final plan to:

- a. Chief executive and senior managers
- b. Key members of the company's emergency response organization
- c. Company headquarters
- d. Community emergency response agencies (appropriate sections)

Have key personnel keep a copy of the plan in their homes. Inform employees about the plan and training schedule.

IMPLEMENT THE PLAN.

Implementation means more than simply exercising the plan during an emergency. It means acting on recommendations made during the vulnerability analysis, integrating the plan into company operations, training employees and evaluating the plan.

INTEGRATE THE PLAN INTO COMPANY OPERATIONS

Emergency planning must become part of the corporate culture.

Look for opportunities to build awareness; to educate and train personnel; to test procedures; to involve all levels of management, all departments and the community in the planning process; and to make emergency management part of what personnel do on a day-to-day basis.

Test how Completely the Plan Has Been Integrated By Asking:

- a. How well does senior management support the responsibilities outlined in the plan?
- b. Have emergency planning concepts been fully incorporated into the facility's accounting, personnel and financial procedures?
- c. How can the facility's processes for evaluating employees and defining job classifications better address emergency management responsibilities?
- d. Are there opportunities for distributing emergency preparedness information through corporate newsletters, employee manuals or employee mailings?
- e. What kinds of safety posters or other visible reminders would be helpful?
- f. Do personnel know what they should do in an emergency?

g. How can all levels of the organization be involved in evaluating and updating the plan?

CONDUCT TRAINING, DRILLS AND EXERCISES

Everyone who works at or visits the facility requires some form of training. This could include periodic employee discussion sessions to review procedures, technical training in equipment use for emergency responders, evacuation drills and full-scale exercises. Below are basic considerations for developing a training plan.

Planning Considerations

Assign responsibility for developing a training plan. Consider the training and information needs for employees, contractors, visitors, managers and those with an emergency response role identified in the plan.

Determine for a 12-month period:

- a. Who will be trained?
- b. Who will do the training?
- c. What training activities will be used?
- d. When and where each session will take place?
- e. How the session will be evaluated and documented?

Use the Training Drills and Exercises Chart in the appendix section to schedule training activities or create one of your own.

Consider how to involve community responders in training activities.

Conduct reviews after each training activity. Involve both personnel and community responders in the evaluation process.

Training Activities

Training can take many forms:

Orientation and Education Sessions -- These are regularly scheduled discussion sessions to provide information, answer questions and identify needs and concerns.

Tabletop Exercise -- Members of the emergency management group meet in a conference room setting to discuss their responsibilities and how they would react to emergency scenarios. This is a cost-effective and efficient way to identify areas of overlap and confusion before conducting more demanding training activities.

Walk-through Drill -- The emergency management group and response teams actually perform their emergency response functions. This activity generally involves more people and is more thorough than a tabletop exercise.

Functional Drills -- These drills test specific functions such as medical response, emergency notifications, warning and communications procedures and equipment, though not necessarily at the same time. Personnel are asked to evaluate the systems and identify problem areas.

Evacuation Drill -- Personnel walk the evacuation route to a designated area where procedures for accounting for all personnel are tested. Participants are asked to make notes as they go along of what might become a hazard during an emergency, e.g., stairways cluttered with debris, smoke in the hallways. Plans are modified accordingly.

Full-scale Exercise -- A real-life emergency situation is simulated as closely as possible. This exercise involves company emergency response personnel, employees, management and community response organizations.

Employee Training

General training for all employees should address:

- a. Individual roles and responsibilities
- b. Information about threats, hazards and protective actions
- c. Notification, warning and communications procedures
- d. Means for locating family members in an emergency
- e. Emergency response procedures
- f. Evacuation, shelter and accountability procedures
- g. Location and use of common emergency equipment
- h. Emergency shutdown procedures

The scenarios developed during the vulnerability analysis can serve as the basis for training events.

Evaluate and modify the Plan

Conduct a formal audit of the entire plan at least once a year. Among the issues to consider are:

- a. How can you involve all levels of management in evaluating and updating the plan?
- b. Are the problem areas and resource shortfalls identified in the vulnerability analysis being sufficiently addressed?
- c. Does the plan reflect lessons learned from drills and actual events?
- d. Do members of the emergency management group and emergency response team understand their respective responsibilities? Have new members been trained?
- e. Does the plan reflect changes in the physical layout of the facility? Does it reflect new facility processes?

- f. Are photographs and other records of facility assets up to date?
- g. Is the facility attaining its training objectives?
- h. Have the hazards in the facility changed?
- i. Are the names, titles and telephone numbers in the plan current?
- j. Are steps being taken to incorporate emergency management into other facility processes?

Have community agencies and organizations been briefed on the plan? Are they involved in evaluating the plan?

In addition to a yearly audit, evaluate and modify the plan at these times:

- a. After each training drill or exercise
- b. After each emergency
- c. When personnel or their responsibilities change
- d. When the layout or design of the facility changes
- e. When policies or procedures change
- f. Remember to brief personnel on changes to the plan.

EMERGENCY MANAGEMENT CONSIDERATIONS

Operational considerations of emergency management

Direction and Control
Communications
Life Safety
Property Protection
Community Outreach
Recovery and Restoration
Administration and Logistics

DIRECTION AND CONTROL

Someone must be in charge in an emergency. The system for managing resources, analyzing information and making decisions in an emergency is called direction and control.

The direction and control system described below assumes a facility of sufficient size. Your facility may require a less sophisticated system, though the principles described here will still apply.

The configuration of your system will depend on many factors. Larger industries may have their own fire team, emergency medical technicians or hazardous materials team, while smaller organizations may need to rely on mutual aid agreements. They

may also be able to consolidate positions or combine responsibilities. Tenants of office buildings or industrial parks may be part of an emergency management program for the entire facility.

Emergency Management Group (EMG)

The EMG is the team responsible for the big picture. It controls all incident-related activities. The Incident Commander (IC) oversees the technical aspects of the response.

The EMG supports the IC by allocating resources and by interfacing with the community, the media, outside response organizations and regulatory agencies.

The EMG is headed by the Emergency Director (ED), who should be the facility manager. The ED is in command and control of all aspects of the emergency. Other EMG members should be senior managers who have the authority to:

- Determine the short- and long- term effects of an emergency
- Order the evacuation or shutdown of the facility
- Interface with outside organizations and the media
- Issue press releases

Incident Command System (ICS)

The ICS was developed specifically for the fire service, but its principles can be applied to all emergencies. The ICS provides for coordinated response and a clear chain of command and safe operations.

The Incident Commander (IC) is responsible for front-line management of the incident, for tactical planning and execution, for determining whether outside assistance is needed and for relaying requests for internal resources or outside assistance through the Emergency Operations Center (EOC).

The IC can be any employee, but a member of management with the authority to make decisions is usually the best choice.

The IC must have the capability and authority to:

- Assume command
- Assess the situation
- Implement the emergency management plan
- Determine response strategies
- Activate resources
- Order an evacuation
- Oversee all incident response activities
- Declare that the incident is "over"

Emergency Operations Center (EOC)

The EOC serves as a centralized management center for emergency operations. Here, the EMG based upon information provided by the IC and other personnel makes decisions. Regardless of size or process, every facility should designate an area where decision-makers can gather during an emergency.

The EOC should be located in an area of the facility not likely to be involved in an incident, perhaps the security department, the manager's office, a conference room or the training center. An alternate EOC should be designated in the event that the primary location is not usable.

Each facility must determine its requirements for an EOC based upon the functions to be performed and the number of people involved. Ideally, the EOC is a dedicated area equipped with communications equipment, reference materials, activity logs and all the tools necessary to respond quickly and appropriately to an emergency.

Planning Considerations

To develop a direction and control system:

Define the duties of personnel with an assigned role. Establish procedures for each position. Prepare checklists for all procedures.

Define procedures and responsibilities for fire fighting, medical and health, and engineering.

Determine lines of succession to ensure continuous leadership, authority and responsibility in key positions.

Determine equipment and supply needs for each response function.

At a minimum, assign all personnel responsibility for:

Recognizing and reporting an emergency

Warning other employees in the area

Taking security and safety measures

Evacuating safely

Provide training.

Security

Isolation of the incident scene must begin when the emergency is discovered. If possible, the discoverer should attempt to secure the scene and control access, but no one should be placed in physical danger to perform these functions. Basic security measures include:

Closing doors or windows

Establishing temporary barriers with furniture after people have safely evacuated

Dropping containment materials (sorbent pads, etc.) in the path of leaking materials

Closing file cabinets or desk drawers

Only trained personnel should be allowed to perform advanced security measures. Access to the facility, the EOC and the incident scene should be limited to persons directly involved in the response.

Coordination of Outside Response

In some cases, laws, codes, prior agreements or the very nature of the emergency require the IC to turn operations over to an outside response organization. When this happens, the protocols established between the facility and outside response organizations are implemented. The facility's IC provides the community's IC a complete report on the situation.

The facility IC keeps track of which organizations are on-site and how the response is being coordinated. This helps increase personnel safety and accountability, and prevents duplication of effort.

COMMUNICATIONS.

Communications are essential to any business operation. A communications failure can be a disaster in itself, cutting off vital business activities.

Communications are needed to report emergencies, to warn personnel of the danger, to keep families and off-duty employees informed about what's happening at the facility to coordinate response actions and to keep in contact with customers and suppliers.

Contingency Planning

Plan for all possible contingencies from a temporary or short-term disruption to a total communications failure. Consider the everyday functions performed by your facility and the communications, both voice and data, used to support them. Consider the business impact if your communications were inoperable. How would this impact your emergency operations?

Prioritize all facility communications. Determine which should be restored first in an emergency.

Establish procedures for restoring communications systems.

Talk to your communications vendors about their emergency response capabilities. Establish procedures for restoring services.

Determine needs for backup communications for each business function. Options include messengers, telephones, portable microwave, amateur radios, point-to-point private lines, satellite, and high-frequency radio.

Emergency Communications

Consider the functions your facility might need to perform in an emergency and the communications systems needed to support them. Consider communications between:

- a. Emergency responders
- b. Responders and the Incident Commander (IC)
- c. The IC and the Emergency Operations Center (EOC)
- d. The IC and employees
- e. The EOC and outside response organizations
- f. The EOC and neighboring businesses
- g. The EOC and employees' families
- h. The EOC and customers
- i. The EOC and media

Methods of communication include:

- a. Messenger
- b. Telephone
- c. Two-way radio
- d. FAX machine
- e. Microwave
- f. Satellite
- g. Dial-up modems
- h. Local area networks
- i. Hand signals

Family Communications

In an emergency, personnel will need to know whether their families are okay. Taking care of one's loved ones is always a first priority. Make plans for communicating with employees' families in an emergency. Also, encourage employees to. Consider how they would communicate with their families in case they are separated from one another or injured in an emergency. Arrange for an out-of-town contact for all family members to call in an emergency. Designate a place to meet family members in case they cannot get home in an emergency.

Notification

Establish procedures for employees to report an emergency. Inform employees of procedures. Train personnel assigned specific notification tasks.

Post emergency telephone numbers near each telephone, on employee bulletin boards and in other prominent locations.

Maintain an updated list of addresses and telephone and pager numbers of key emergency response personnel (from within and outside the facility).

Determine government agencies' notification requirements in advance. Notification must be made immediately to local government agencies when an emergency has the potential to affect public health and safety. Prepare announcements that could be made over public address systems.

Warning

Establish a system for warning personnel of an emergency. The system should:

- a. Be audible or within view by all people in the facility
- b. Have an auxiliary power supply
- c. Have a distinct and recognizable signal

Make plans for warning persons with disabilities. For instance, a flashing strobe light can be used to warn hearing-impaired people.

Familiarize personnel with procedures for responding when the warning system is activated.

Establish procedures for warning customers, contractors, visitors and others who may not be familiar with the facility's warning system.

Test your facility's warning system at least monthly.

LIFE SAFETY.

Protecting the health and safety of everyone in the facility is the first priority during an emergency.

1. Evacuation Planning

One common means of protection is evacuation. In the case of fire, an immediate evacuation to a predetermined area away from the facility may be necessary. In a hurricane, evacuation could involve the entire community and take place over a period of days.

To develop an evacuation policy and procedure:

- a. Determine the conditions under which an evacuation would be necessary.
- b. Establish a clear chain of command. Identify personnel with the authority to order an evacuation. Designate "evacuation wardens" to assist others in an evacuation and to account for personnel.

- c. Establish specific evacuation procedures. Establish a system for accounting for personnel. Consider employees' transportation needs for community-wide evacuations.
- d. Establish procedures for assisting persons with disabilities and those who do not speak English.
- e. Post evacuation procedures.
- f. Designate personnel to continue or shut down critical operations while an evacuation is underway. They must be capable of recognizing when to abandon the operation and evacuate themselves.
- g. Coordinate plans with the local emergency management office.

Evacuation Routes and Exits

Designate primary and secondary evacuation routes and exits. Have them clearly marked and well lit. Post signs.

Install emergency lighting in case a power outage occurs during an evacuation.

Ensure that evacuation route and emergency exits are:

- a. Wide enough to accommodate the number of evacuating personnel
- b. Clear and unobstructed at all times
- c. Unlikely to expose evacuating personnel to additional hazards
- d. Have evacuation routes evaluated by someone not in your organization.

Assembly Areas and Accountability

Obtaining an accurate account of personnel after a site evacuation requires planning and practice. Designate assembly areas where personnel should gather after evacuating. Take a head count after the evacuation. The names and last known locations of personnel not accounted for should be determined and given to the EOC. (Confusion in the assembly areas can lead to unnecessary and dangerous search and rescue operations.) Establish a method for accounting for non-employees such as suppliers and customers.

Establish procedures for further evacuation in case the incident expands. This may consist of sending employees' home by normal means or providing them with transportation to an off-site location.

Shelter

In some emergencies, the best means of protection is to take shelter either within the facility or away from the facility in a public building. Consider the conditions for taking shelter, e.g., tornado warning. Identify shelter space in the facility and in the community. Establish procedures for sending personnel to shelter.

Determine needs for emergency supplies such as water, food and medical supplies.

Designate shelter managers, if appropriate.

Coordinate plans with local authorities.

Training and Information

Train employees in evacuation, shelter and other safety procedures. Conduct sessions at least annually or when:

- a. Employees are hired
- b. Evacuation wardens, shelter managers and others with special assignments are designated
- c. New equipment, materials or processes are introduced
- d. Procedures are updated or revised
- e. Exercises show that employee performance must be improved

Provide emergency information such as checklists and evacuation maps. Post evacuation maps in strategic locations.

Consider the information needs of customers and others that visit the facility.

PROPERTY PROTECTION.

Protecting facilities, equipment and vital records is essential to restoring operations once an emergency has occurred.

Planning Considerations

Establish procedures for:

- a. Fighting fires
- b. Containing material spills
- c. Closing or barricading doors and windows
- d. Shutting down equipment
- e. Covering or securing equipment
- f. Moving equipment to a safe location

Identify sources of backup equipment, parts and supplies.

Designate personnel to authorize, supervise and perform a facility shutdown. Train them to recognize when to abandon the effort.

Obtain materials to carry out protection procedures and keep them on hand for use only in emergencies.

Protection Systems

Determine needs for systems to detect abnormal situations, provide warning and protect property. Consider:

- a. Fire protection systems
- b. Lightning protection systems
- c. Water level monitoring systems
- d. Overflow detection devices
- e. Automatic shutoffs
- f. Emergency power generation systems

Facility Shutdown

Facility shutdown is generally a last resort but always a possibility. Improper or disorganized shutdown can result in confusion, injury and property damage. Some facilities require only simple actions such as turning off equipment, locking doors and activating alarms. Others require complex shutdown procedures.

Work with department heads to establish shutdown procedures. Include information about when and how to shut off utilities. Identify:

- a. The conditions that could necessitate a shutdown
- b. Who can order a shutdown?
- c. Who will carry out shutdown procedures?
- d. How a partial shutdown would affect other facility operations
- e. The length of time required for shutdown and restarting

Train personnel in shutdown procedures. Post procedures.

Records Preservation: Vital records may include:

Financial and insurance information
Engineering plans and drawings
Product lists and specifications
Employee, customer and supplier databases
Formulas and trade secrets
Personnel files

Preserving vital records is essential to the quick restoration of operations. Analyzing vital records involves:

Classifying operations into functional categories, e.g., finance, production, sales, administration.

Determining essential functions for keeping the business up and running, such as finance, production, sales, etc.

Identifying the minimum information that must be readily accessible to perform essential functions, e.g., maintaining customer collections may require access to account statements

Identifying the records that contain the essential information and where they are located

Identifying the equipment and materials needed to access and use the information.

Next, establish procedures for protecting and accessing vital records

COMMUNITY OUTREACH.

Your facility's relationship with the community will influence your ability to protect personnel and property and return to normal operations.

This section describes ways to involve outside organizations in the emergency management plan.

Involving the Community

Maintain a dialogue with community leaders, first responders, government agencies, community organizations and utilities.

Have regular meetings with community emergency personnel to review emergency plans and procedures. Talk about what you're doing to prepare for and prevent emergencies. Explain your concern for the community's welfare. Identify ways your facility could help the community in a community-wide emergency. Look for common interests and concerns. Identify opportunities for sharing resources and information. Conduct confidence-building activities such as facility tours. Do a facility walk-through with community response groups. Involve community fire, police and emergency management personnel in drills and exercises. Meet with your neighbors to determine how you could assist each other in an emergency.

Mutual Aid Agreements

To avoid confusion and conflict in an emergency, establish mutual aid agreements with local response agencies and businesses.

These agreements should:

- a. Define the type of assistance
- b. Identify the chain of command for activating the agreement
- c. Define communications procedures

Include these agencies in facility training exercises whenever possible.

Community Service

In community-wide emergencies, business and industry are often needed to assist the community with:

- a. Personnel
- b. Equipment
- c. Shelter

- d. Training
- e. Storage
- f. Feeding facilities
- g. EOC facilities
- h. Food, clothing, building materials
- i. Funding
- j. Transportation

While there is no way to predict what demands will be placed on your company's resources, give some thought to how the community's needs might influence your corporate responsibilities in an emergency. Also, consider the opportunities for community service before an emergency occurs.

Public Information

When site emergencies expand beyond the facility, the community will want to know the nature of the incident, whether the public's safety or health is in danger, what is being done to resolve the problem and what was done to prevent the situation from happening.

Determine the audiences that may be affected by an emergency and identify their information needs.

Media Relations

In an emergency, the media are the most important link to the public. Try to develop and maintain positive relations with media outlets in your area. Determine their particular needs and interests. Explain your plan for protecting personnel and preventing emergencies. Determine how you would communicate important public information through the media in an emergency. Designate a trained spokesperson and an alternate spokesperson. Set up a media briefing area. Establish security procedures. Establish procedures for ensuring that information is complete, accurate and approved for public release. Determine an appropriate and useful way of communicating technical information. Prepare background information about the facility.

When providing information to the media during an emergency:

Do's

Give all media equal access to information.

When appropriate; conduct press briefings and interviews. Give local and national media equal time.

Try to observe media deadlines.

Escort media representatives to ensure safety.

Keep records of information released.

Provide press releases when possible.

Don'ts

Do not speculate about the incident.

Do not permit unauthorized personnel to release information.
Do not cover up facts or mislead the media.
Do not place blame for the incident.

RECOVERY AND RESTORATION

Business recovery and restoration, or business resumption goes right to a facility's bottom line: keeping people employed and the business running.

Consider making contractual arrangements with vendors for such post-emergency services as record preservation, equipment repair, earthmoving or engineering.

Meet with your insurance carriers to discuss your property and business resumption policies. Determine critical operations and make plans for bringing those systems back on-line. The process may entail:

- a. Repairing or replacing equipment
- b. Relocating operations to an alternate location
- c. Contracting operations on a temporary basis

Take photographs or videotape the facility to document company assets. Update these records regularly.

Continuity of Management

You can assume that not every key person will be readily available or physically at the facility after an emergency. Ensure that recovery decisions can be made without undue delay. Consult your legal department regarding laws and corporate bylaws governing continuity of management.

Establish procedures for:

- a. Assuring the chain of command
- b. Maintaining lines of succession for key personnel
- c. Moving to alternate headquarters

Include these considerations in all exercise scenarios.

Employee Support

Since employees who will rely on you for support after an emergency are your most valuable assets, consider the range of services that you could provide or arrange for, including:

- a. Cash advances
- b. Salary continuation
- c. Flexible work hours
- d. Reduced work hours
- e. Crisis counseling

- f. Care packages
- g. Day care

Resuming Operations

Immediately after an emergency, take steps to resume operations.

Establish a recovery team, if necessary. Establish priorities for resuming operations. Continue to ensure the safety of personnel on the property. Assess remaining hazards. Maintain security at the incident scene. Conduct an employee briefing. Keep detailed records. Consider audio recording all decisions. Take photographs of or videotape the damage. Account for all damage-related costs. Establish special job order numbers and charge codes for purchases and repair work. Follow notification procedures. Notify employees' families about the status of personnel on the property. Notify off-duty personnel about work status. Notify insurance carriers and appropriate government agencies. Protect undamaged property. Close up building openings. Remove smoke, water and debris. Protect equipment against moisture. Restore sprinkler systems. Physically secure the property. Restore power. Conduct an investigation. Coordinate actions with appropriate government agencies.

Conduct salvage operations. Segregate damaged from undamaged property. Keep damaged goods on hand until an insurance adjuster has visited the premises, but you can move material outside if it's seriously in the way and exposure to the elements won't make matters worse.

Take an inventory of damaged goods. This is usually done with the adjuster or the adjuster's salvor if there is any appreciable amount of goods or value. If you release goods to the salvor, obtain a signed inventory stating the quantity and type of goods being removed.

Restore equipment and property. For major repair work, review restoration plans with the insurance adjuster and appropriate government agencies. Assess the value of damaged property. Assess the impact of business interruption. Maintain contact with customers and suppliers.

ADMINISTRATION AND LOGISTICS

Maintain complete and accurate records at all times to ensure a more efficient emergency response and recovery. Certain records may also be required by regulation or by your insurance carriers or prove invaluable in the case of legal action after an incident.

Administrative actions prior to an emergency include :

- a. Establishing a written emergency management plan
- b. Maintaining training records
- c. Maintaining all written communications
- d. Documenting drills and exercises and their critiques

- e. Involving community emergency response organizations in planning activities

Administrative actions during and after an emergency include :

- a. Maintaining telephone logs
- b. Keeping a detailed record of events
- c. Maintaining a record of injuries and follow-up actions
- d. Accounting for personnel
- e. Coordinating notification of family members
- f. Issuing press releases
- g. Maintaining sampling records
- h. Managing finances
- i. Coordinating personnel services
- j. Documenting incident investigations and recovery operations

Logistics

Before an emergency, logistics may entail:

- a. Acquiring equipment
- b. Stockpiling supplies
- c. Designating emergency facilities
- d. Establishing training facilities
- e. Establishing mutual aid agreements
- f. Preparing a resource inventory

During an emergency, logistics may entail the provision of:

- a. Providing utility maps to emergency responders
- b. Providing material safety data sheets to employees
- c. Moving backup equipment in place
- d. Repairing parts
- e. Arranging for medical support, food and transportation
- f. Arranging for shelter facilities
- g. Providing for backup power
- h. Providing for backup communications

INCIDENT COMMAND SYSTEM

There are a number of sound reasons for using an Incident Command System when dealing with hazardous materials emergencies. Above all, an Incident Command System (ICS) provides a clear structure for the diverse activities necessary to successfully control a hazardous materials incident.

The ICS is the basis for every emergency situation. This system utilizes sector operations to set and control objectives reflecting the overall management of the emergency situation. The ICS organizational structure develops in a modular fashion based upon the kind and size of the incident.

Regardless of the size of the incident, the On-Scene Incident Commander establishes the mobile On-Scene Command Center at the perimeter of the emergency area. The Incident Commander will respond and set up the Incident Command Center at a location more remote than the On-Scene Command Center.

Emergency Response Plan calls for command centers to be established and utilized for different types and levels of emergencies. These command centers are:

- On-Scene Command Center
- Incident Command Center
- Emergency Operations Staff Center

Ensuring That Someone Is Always In Charge

A key element of any Incident Command model is that a single person is in charge at each incident. This person is responsible for overall command of the emergency response and for establishing operational goals and objectives at the scene.

By having one person in charge, two major pitfalls are avoided. One of these is having no one in charge. A second major problem prevented by an Incident Command System is that of too many people taking charge. When more than one person acts as the Incident Commander, conflicting orders and directives may be issued and the actions of emergency response forces are likely to be poorly coordinated.

Ensuring The Safety Of Operating Forces

Emergency response personnel are confronted by a number of safety hazards during an emergency. An Incident Command System helps ensure that actions taken at an incident are effectively controlled and that the safety of forces operating at an emergency is not compromised.

Conforming To Laws And Standards

Another significant reason for implementing an Incident Command System when dealing with hazardous materials emergencies is that laws require it and consensus standards encourage it. The Superfund Amendments and Reauthorization Act of 1986 (SARA) requires that emergency response organizations handling hazardous materials incidents operate with an Incident Command System. Regulations from the Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) mandate use of Incident Command Systems as well.

Efficiently Utilizing Resources

When dealing with any emergency, it is important that the resources for stabilizing and controlling the incident be used efficiently. Incident Command Systems provide the structure for managing these resources and ensuring that they are deployed effectively. These resources include personnel, apparatus, specialized equipment, materials, and facilities required to deal with the emergency.

In summary, there are many reasons for using an Incident Command System in hazardous materials emergencies. All of these reasons evolve from an underlying rationale: the response to an emergency should be controlled and well organized. Resources used to stabilize the emergency should be used to maximum benefit. The risks to which Team Members and other emergency response personnel are subjected should be minimized wherever possible.

MANAGEMENT CONCEPTS

There are a number of management concepts that are considered basic, mandatory, and universal to all organized efforts. These management principles form the framework of effective, well-directed efforts and are equally applicable to hazardous materials emergency response.

These basic management principles include:

- Division of labor
- Lines of authority
- Delegation
- Unity of command
- Span of control

Division Of Labor

Work is assigned to individuals or units based on a well-arranged plan. Careful consideration is given to the functions to be performed, as well as to the training and capabilities of the individuals who will be performing the work.

Lines Of Authority

Individuals must be aware of their roles within the organization and their relationships to other individuals. This principle applies to functional units within an organization as well.

Delegation

Incident Command Systems use delegation extensively. It is impossible for a single person to make all decisions and directly control all operations at a hazardous materials emergency. Through effective use of delegation, the Incident Commander is able to distribute responsibility for carrying out specific assignments.

Unity Of Command

Every person within an organization should have only one person to whom he or she reports at any one time. This is the principle of unity of command. Without it,

individuals or units could receive multiple and conflicting directives from higher levels of authority.

Span Of Control

One person can only oversee a limited number of persons or units. In emergency operations, the generally accepted span of control is four to seven persons or units. The span of control for a specific commander or officer is determined by a number of factors that are unique to each situation. Examples of these factors include the degree of difficulty or danger associated with tasks being performed, and the amount of discretion or latitude given to the persons or units undertaking the tasks. The amount of latitude or discretion extended to individuals and units is typically a function of their training, education, and experience.

INCIDENT COMMAND SPECIFIC RESPONSIBILITIES

The Incident Commander, will determine the additional management needs for the incident. This determination will be based upon the kind, size, potential and duration of the incident. If additional management needs are required because of the apparent severity of the emergency, the situation is upgraded to a crisis as defined in your ERP (Emergency Response Plan)

The Incident Commander will activate the fixed Emergency Operations Center (EOC) if appropriate. Once the EOC is activated the Incident Commander transfers overall responsibility to the Plant Manager but retains command of the field operations.

In addition to the Incident Commander the ERP (Emergency Response Plan) for YOUR FACILITY further delineates and identifies specific responsibilities for personnel involved at an emergency. Some of these include:

- Emergency Operations Center Commander
- Communications Coordinator
- Health and Safety Coordinator
- Environmental Coordinator
- Human Resources Coordinator
- Logistics Support Coordinator
- Production Coordinator
- First Unit Representative
- Second Unit Representative

- Logistics Supply Officer
- Staging Officer
- Liaison and Safety Officer

THE COMMAND FUNCTION

Regardless of size or complexity, the **Command Function** is established in every emergency response situation involving hazardous materials and is filled by the individual who is the Incident Commander. When warranted, the Incident Commander can receive assistance in carrying out the Command function by placing someone in charge of **Safety**. Additional Command Staff positions, such as **Liaison** and **Information**, can be established as needed. The following lists some of the important responsibilities of the Command Function.

Pre-Incident Planning

Taking a pro-active role, prior to the uncontrolled or accidental release of a hazardous material, can have dramatic and positive effects on response time and the safety of responding personnel. Emergency pre-planning is vital to the successful response to chemical spills and releases.

At YOUR FACILITY these plans include incipient stage response, fire/explosion, gas release, solid or liquid release, and injury to employees or contractors. The specific scenarios can be found in Attachment IV of the ERP.

Overall Management Of The Incident

Because the Incident Commander assumes overall responsibility for incident management, a major responsibility is to assess or "size up" the problems presented by the incident and to consider priority tasks, available resources, and other relevant factors. Based on this assessment, the Incident Commander considers various potential courses of action, makes key strategic decisions, and establishes overall goals and objectives for the operation to stabilize and control the incident.

Resource Management

Resources include the personnel, equipment, and materials needed to stabilize, control, and terminate an emergency incident. The Incident Commander has the responsibility for assessing resource needs, summoning these resources, deploying them at the emergency incident, and then releasing them from the scene.

Safety And Risk Management

Ultimate responsibility for the safety of civilians and forces operating at an emergency incident rests with the Incident Commander. In carrying out this responsibility, the Incident Commander must maintain a constant awareness of the status of the emergency situation and the hazards to which Team Members and others

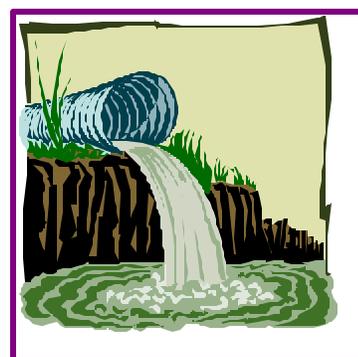
may be exposed. Based on an ongoing evaluation of the situation, the Incident Commander must assess the potential benefits of various courses of action and modify incident goals and objectives when appropriate.

At all emergency response incidents, the Incident Commander should appoint a Safety Officer. The Safety Officer assists the Incident Commander by providing appropriate advice and by specifically focusing on safety and risk management concerns. Responsibilities include:

- Monitoring and observing safety factors specifically associated with the hazardous materials operation.
- Advising Incident Commander of relevant safety concerns.
- Ensuring correct and complete utilization of personal protective equipment designated by the Hazardous Materials Sector Officer.
- Coordinating efforts with the Operations Function.
- Monitoring the exact amount of time that entry team personnel have been on air or operating in controlled areas.

Environmental Management

Environmental concerns must be addressed as many hazardous materials incidents occur outdoors, or the release reaches the environment via storm sewers. The Incident Commander has a responsibility for minimizing environmental damage and reducing need for environmental clean up by selecting appropriate control methods. The Environmental Officer assists the Incident Commander by providing appropriate advice and by specifically



focusing on environmental management and risk concerns. The Environmental Officer makes required notifications of releases to appropriate agencies and provides advice on control measures that minimize environmental damage.

Coordination Of Outside Agencies

Stabilization, control, and termination of many hazardous materials incidents require the combined efforts of numerous government entities and private firms. The Incident Commander has the responsibility for effectively coordinating the actions of these organizations. When a number of organizations are involved in the response, the Incident Commander usually appoints a Liaison Officer to interact directly with representatives of these organizations.

Information

In major incidents, public information and media relations become essential. The Information Officer has the responsibility of providing timely and accurate information to the public via the media.

Other Functions

Other function areas within the Incident Command System include planning, medical (EMS), finance, security, and logistics. Each would have an officer reporting back to the command area. As the incident escalates, functions are added as needed. A function is further divided into sectors, with the sectors reporting to their overseeing function area.

Responsibility of the Initial Incident Commander

There are six specific responsibilities assumed by the Initial Incident Commander.

1. Make an Initial On-scene Assessment

Upon arrival to the scene, the Initial Incident Commander must carefully evaluate the situation. There are several questions that should be asked during this evaluation:

- Are lives in jeopardy?
- What property is at risk?
- What are the hazards?
- What can be done safely to control all hazards?

The answers to these and other questions must be carefully considered in the earliest stages of a response.

2. Determine Actions

After an initial evaluation of the emergency has been made, the Incident Commander must make a fundamental decision as to whether to approach stabilization and control of the incident from an offensive or defensive mode. There are a number of factors that must be considered in making the offensive/defensive decision. Among the most important factors that affect this decision are life hazards, size and complexity of the incident, materials involved, and the quantity and availability of resources that can be placed into action.

3. Establish Initial Goals and Objectives

After making an assessment of the situation and deciding on an offensive or defensive approach, the Incident Commander must establish initial goals and objectives. These goals and objectives should always be realistic and focused on saving lives, stabilizing the incident, and minimizing economic and environmental impact caused by the incident. The Incident Commander should consider a “best case” scenario and develop initial goals and objectives from a pro-active standpoint. -

4. Determine Additional Requirements

In most serious hazardous materials emergencies, initial response resources will not be adequate to stabilize, control, and terminate the incident. One of the most important functions of the Initial Incident Commander is to determine resource needs and promptly initiate the appropriate requests for additional personnel, apparatus, material, equipment, and other assistance as required.

5. Deploy Personnel and Units

Closely related to the function of establishing goals and objectives is the deployment of units and personnel in support of these goals and objectives. An integral element of deploying personnel and units is issuing specific, objective oriented assignments.

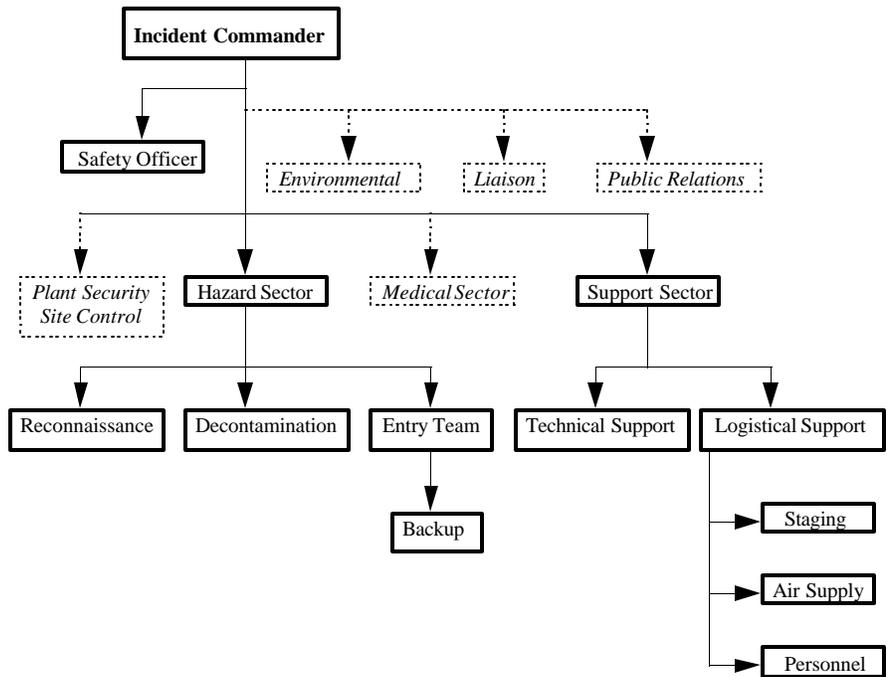
6. Establish a Command Post

During initial evaluation it is not unusual for the initial Incident Commander to move around the scene of an incident in an effort to obtain complete information. However, in all but the most minor incidents, it is important that a formal, stationary Command Post be established promptly. In addition to being located in a safe area, the Command Post should be easily visible.

BRANCHES & SECTORS

Within the Command Function there is a need for additional delegation and decentralization. This is accomplished through the use of Sectors. Sectors are geographic or functional areas of operation. A Sector Officer who assumes responsibility for actions that occur within the assigned Sector heads each Sector. Two Sectors are identified in the Incident Command chart - Hazard and Support. A Medical Sector may be added if the incident warrants. However, medical monitoring of personnel is still provided even if a medical sector is not established.

The following flow chart shows the relationships of various sectors, (the sectors outlined: environmental, liaison, public relations, etc., are those that may need to be added if the incident escalates). The Incident Command structure should be kept as simple as possible but has the capacity to change as conditions of the response change.



HAZMAT BRANCH OPERATIONS

Hazmat operations are the responsibility of your facility's Emergency Response Team (ERT). Personnel trained to the Hazardous Materials Technician level

perform most technical HAZMAT operations. Organizations, which do not possess this capability, must limit their response activities to the training and resource levels of their personnel.

Hazmat personnel will function as an ICS Group for some Level I and all Level II incidents. The Hazmat Officer will usually report to the Operations Section Chief, but would report directly to the Incident Commander if the Operations Section were not established. To simplify our discussions, we will use the term "Hazmat Branch" to denote both group or branch operations.

The Hazmat Branch is responsible for all HAZMAT operations, which occur at an incident. Primary Hazmat Branch functions include:

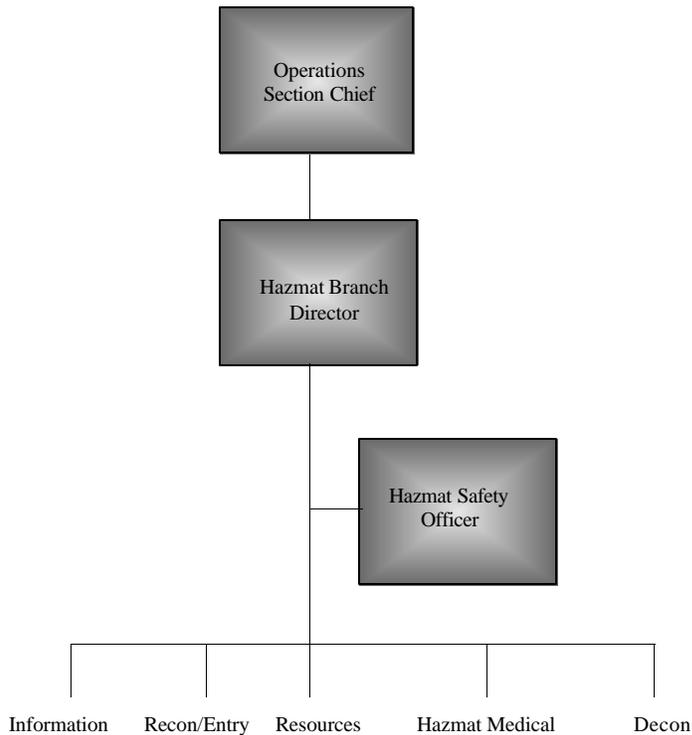
- safety
- site control
- entry
- decontamination

Secondary functions include medical and resource concerns. Specific tasks associated with each of these functions include:

- **Safety Function-** primarily the responsibility of the Incident Safety Officer and the Hazmat Safety Officer. Responsible for ensuring that safe and accepted practices and procedures are followed throughout the course of the incident. Possess both the authority and responsibility to stop any unsafe actions and correct unsafe practices.
- **Site Control Function-** establish control zones, establish and monitor access routes at the incident site, and ensure that contaminants are not being spread.
- **Information Function-** responsible for gathering, compiling, coordinating and disseminating all data and information relative to the incident. This data and information will be used within the Hazmat Branch for assessing hazard and evaluating risks, evaluating public protective options, selecting PPE, and developing the incident action plan.
- **Entry Function-** responsible for all entry and back-up operations within the Hot Zone, including reconnaissance, monitoring, sampling, and mitigation.
- **Decontamination Function-** responsible for the research and development of the decon plan, set-up, and operation of an effective decontamination area capable of handling all potential exposures, including entry personnel, contaminated patients, and equipment.
- **Medical Function-** responsible for pre- and post-entry medical monitoring and evaluation of all entry personnel, and provides technical medical guidance to the Hazmat Branch as requested.
- **Resource Function-** responsible for control and tracking of all supplies and equipment used by the Hazmat Branch during the course of an emergency, including documenting the use of all-expendable supplies and materials. Coordinates, as necessary with the Logistics Section Chief.

HAZMAT BRANCH STAFFING

The following diagram illustrates the organizational structure and staffing for the Hazmat Branch. The respective positions and responsibilities of the Hazmat Branch are outlined below.



The Hazmat Branch is responsible for all hazmat operations which occur at an incident.

HAZMAT BRANCH DIRECTOR

Responsibility for the management and coordination of all functional responsibilities assigned to the Hazmat Branch, including safety, site control, research, entry, and decontamination falls to the Hazmat Branch Director. The Hazmat Branch Director must have a high level of technical knowledge and be knowledgeable of both the strategic and tactical aspects of HAZMAT response. The Hazmat Branch Director will typically be trained to the Hazardous Materials Technician level and will often be an officer on the ERT. Depending upon the scope and nature of the incident, the Hazmat Branch Director will report to either the Operations Section Chief or the Incident Commander.

Based upon the IC's strategic goals, the Hazmat Branch Director develops the tactical options to fulfill the HAZMAT portion of the Incident Action Plan. Working at the command post, the Hazmat Branch Director is responsible for ensuring that the following tasks are completed:

- Control zones are established and monitored.
- Site monitoring is conducted to determine the presence and concentration of contaminants.

- Site safety plan is developed and implemented.
- Tactical objectives are established for the HAZMAT Entry Group within the limits of the team's training and equipment limitations.
- All Hot Zone operations are coordinated with the Operations Section Chief or Incident Commander to ensure those tactical goals is being met.

The Hazmat Branch Director will also have a staff consisting of the Hazmat Safety Officer and the Hazmat Liaison Officer. The radio designation is "HAZMAT."

HAZMAT SAFETY OFFICER

The Hazmat Safety Officer reports to the Hazmat Branch Director and is subordinate to the Incident Safety Officer. This individual is responsible for coordinating safety activities within the Hazmat Branch but also has certain responsibilities that may circumvent the normal chain of command. Remember-the Incident Safety Officer is responsible for the safety of all personnel operating at the emergency, while the Hazmat Safety Officer is responsible for all operations within the Hazmat Branch and within the Hot and Warm Zones. This includes having the authority to stop or prevent unsafe actions and procedures during the course of the incident.

The Hazmat Safety Officer must have a high level of technical knowledge to anticipate a wide range of safety hazards. This should include being HAZMAT trained, preferably to the Hazardous Materials Technician level, and being knowledgeable of both the strategic and tactical aspects of HAZMAT response. While it is not the Hazmat Safety Officer's job to make tactical decisions or to set goals and objectives, it is his or her responsibility to ensure that operations are implemented in a safe manner. The specific functions and responsibilities of the Hazmat Safety Officer include:

- Participate in the development and implementation of the Site Safety Plan.
- Advise the Hazmat Branch Director of all aspects of health and safety, including work/rest cycles for the Entry Team.
- Possess the authority to alter, suspend, or terminate any activity that may be judged to be unsafe.
- Ensure the protection of all Hazmat Branch personnel from physical, chemical, and/or environmental hazards and exposures.
- Identify and monitor personnel operating within the Hot Zone, including documenting and confirming both "stay times" (i.e., time using air supply) and "work times" (i.e., time within the hot or warm zone performing work) for all entry and decon personnel.
- Ensure that EMS personnel and/or units are provided, and coordinate with the Hazmat Medical Officer.
- Ensure that health exposure logs and records are maintained for all Hazmat Branch personnel, as necessary.
- The radio designation is "HAZMAT SAFETY."

HAZMAT INFORMATION/RESEARCH GROUP/TEAM

The HAZMAT Information/Research Group is managed by the Information Officer (may also be known as Research or Science). Depending upon the level of the incident and the number of hazardous materials involved, the Information Group may consist of several persons or teams. The HAZMAT Information Group and the Information Officer are responsible for the following:

- Provide technical support to the Hazmat Branch.
- Research, gather and compile technical information and assistance from both public and private agencies.
- Provide and interpret environmental monitoring information, including the analysis of HAZMAT samples and the classification and/or identification of unknown substances.
- Provide recommendations for the selection and use of protective clothing and equipment.
- Project the potential environmental impacts of the HAZMAT release.

The Information Officer's radio designation is "INFORMATION."

ENTRY GROUP/TEAM

The Entry Officer manages the Entry Group. This individual is responsible for all entry operations within the Hot Zone and should be in constant communication with the Entry Team.

The Entry Group and the Entry Officer are responsible for the following:
Recommend actions to the Hazmat Branch Officer to control the emergency situation within the Hot Zone.

- Implement all offensive and defensive actions, as directed by the Hazmat Branch Officer, to control and mitigate the actual or potential HAZMAT release.
- Direct rescue operations within the Hot Zone, as necessary.
- Coordinate all entry operations with the Decon, Information, and Hazmat Medical Groups.

The Entry Group Officer's radio designation is "ENTRY."

Personnel assigned to the Entry Group will include the entry and backup teams, and personnel assigned for entry support. The Entry Team consists of all personnel who will enter and operate within the Hot Zone to accomplish the tactical objectives specified within the Incident Action Plan. Entry Teams will always operate using a buddy system.

The Back-Up Team is the safety team that will extract the entry team in the event of an emergency. The Back-Up Team must be in-place and ready whenever entry personnel are operating within the Hot Zone.

Entry support personnel (may also be known as the Dressing Team) are responsible for the proper donning and outfitting of both the Entry and Back-Up Teams. The Dressing Team will report to the Dressing Officer, who is responsible for determining the number of entry personnel, having sufficient entry support personnel available, and ensuring that the appropriate levels of PPE are available for donning.

DECONTAMINATION GROUP/TEAM

The Decon Officer manages the Decontamination Group. This individual is responsible for the Decon Team. The Decontamination Group and the Decon Officer are responsible for the following:

- Determine the appropriate level of decontamination to be provided.
- Ensure that proper decon procedures are used by the Decon Team, including decon area set-up, decon methods and procedures, staffing, and protective clothing requirements.
- Coordinates decon operations with the Entry Officer and other personnel within the Hazmat Branch.
- Coordinate the transfer of decontaminated patients requiring medical treatment and transportation with the HAZMAT Medical Group.
- Ensure that the Decon Area is established before any entry personnel are allowed to enter the Hot Zone.
- Monitor the effectiveness of decon operations.
- Control all personnel entering and operating within the decon area.
- The Decontamination Officer's radio designation is "DECON."

HAZMAT MEDICAL GROUP/TEAM

The Hazmat Medical Group is led by the Hazmat Medical Officer Personnel assigned to this group will be located in the Entry Team dressing area and in the Rehabilitation Area. The HAZMAT Medical Group and Hazmat Medical Officer are responsible for the following:

- Provide pre-entry and post-entry medical monitoring of all entry and back-up personnel.
- Provide technical assistance for all EMS-related activities during the course of the incident.
- Provide emergency medical treatment and recommendations for ill, injured, or chemically contaminated civilians or emergency response personnel.
- Provide EMS support for the Rehab Area.

The Hazmat Medical Officer's radio designation is "HAZMAT MEDIC."

Although subordinate to the Decon Officer, the Hazmat Rehabilitation Officer must also work closely with the HAZMAT Medical Group. The Rehab Officer is responsible for overseeing all operations within the Rehab Area.

The HAZMAT Medical Group will conduct post-entry medical monitoring, cooling, and rehydration of entry and back-up personnel in the Rehab Area. All operating personnel should not be given anything to eat or drink unless approved by Hazmat Medical personnel. Medical findings and personal exposure forms should be forwarded to the Hazmat Safety Officer and/or the Entry Group Officer.

HAZMAT RESOURCES GROUP/TEAM

The Hazmat Resource Officer leads the HAZMAT Resources Group. Personnel assigned to this group will be located in the Cold Zone and will be responsible for acquiring all supplies and equipment required for Hazmat Branch operations, including protective clothing, monitoring instruments, leak control kits, etc. In addition, the Hazmat Resources Officer will also be responsible for documenting all supplies and equipment expended as part of the emergency response effort. The HAZMAT Resources Group and Hazmat Resources Officer must work closely with the Logistics Section Chief.

The Hazmat Resource Officer's radio designation is "HAZMAT RESOURCES."

SUPPORT SECTOR

It is the responsibility of this sector to provide the resources, data, equipment, materials, and supplies needed for the hazardous materials element of the emergency scene operation. The Support Sector Officer is in communication with the Hazard Sector Officer and the Incident Commander.

Logistical Support

Logistical support has the responsibility to provide the equipment, materials, and supplies needed for the Hazardous Materials Sector for emergency scene operations. This includes staging of materials, air supply, and equipment support.

Technical Support

The responsibilities of this team include identifying products involved, associated hazards, strategies for control, recommendations on PPE and appropriate decontamination procedures.

ASSUMING COMMAND OF THE EMERGENCY

Every ERT member may, at some point, be placed in a position of having to assume initial command of a hazardous materials incident. As noted in previous sections, the Command Function is a requirement in emergency response situations involving hazardous materials. As the individual in charge, the Incident Commander must temper the desire to take immediate action and focus instead on activities that are well planned and considered. In addition, the Incident Commander must maintain a broad, future oriented outlook and make a concerted effort to consider the entire incident, all the factors affecting it, and the likely course of events in the future.

IMPLEMENTING THE COMMAND FUNCTION

Command should be implemented as early in the incident as possible. In general, the person in charge of the first arriving group should assume command of the incident. The underlying rationale for establishing command as promptly as possible is that the response should be organized and controlled from start to finish. It is very difficult to recover from initial errors that were made because the Command Function was not implemented at the earliest possible stage of the incident.

Many people are under the mistaken impression that assumption of command is a responsibility for management personnel. This is not the case. Often, the most important decisions concerning effective stabilization and control of an incident must be made in the first few minutes after the arrival of initial responding personnel.

TRANSFER OF COMMAND

As a hazardous materials incident evolves it is likely that transfers of command will take place. The most critical transfers of command occur while an incident is still escalating. Typically, ranking or more highly trained personnel arrive on the scene and subsequently assume the function of Incident Commander. The transfer of command is a transaction between these parties. The responsibility for initiating the transaction rests with the person who desires to assume command. Once this request has been made, it is the responsibility of the incumbent Incident Commander to brief the new Incident Commander on the response situation, the action plan in effect, the status of resources at the scene, and any unusual safety problems. After this exchange of information the new Incident Commander then assumes the Command Function.

INCIDENT TERMINATION

An often overlooked but essential element of incident management deals with those actions that take place after the incident has been stabilized. Even after an incident has been stabilized the job of the Incident Commander remains vital.

Command Activities During Termination (Demobilization)

The key functions and structure of an Incident Command System must be maintained throughout the incident. This ensures that the situation is mitigated and that cleanup activities return the facility and/or environment to the conditions equal to those that existed prior to the incident.

Post-Emergency Response Procedures

The EOSC (Emergency Operations Staff Commander) and staff are responsible for developing an overall Incident Demobilization Plan with specific instructions for when and how to return the plant to normal operations. This procedure is located in Attachment XXI of the Emergency Response Plan.

Incident Transition

Transition is the phase between the end of the emergency and the initiation of restoration and recovery operations. At this phase of the incident it is imperative that accurate information is passed from the emergency response team to clean-up

personnel. A single contact person who can share needed information with clean-up personnel should be appointed during the emergency response team debriefing. This exchange of information will facilitate safe and effective clean up of the affected area.

Unlike fire emergencies where it is usually obvious that the fire is out, hazardous materials incidents do not always have a clear ending. Consider the following examples:

- Liquid materials can soak into the ground and continue to present health and environmental hazards even though it is not obvious.
- Containers involved in the incident may not show visible signs of stress yet may violently rupture due to a change in temperature or while being moved or off loaded.
- Flammable vapors can accumulate in confined areas and enter the flammable range.

Emergency responders and support personnel often get mixed signals concerning whether hazards remain at this phase of the operation. If spills have been controlled and personnel are standing around waiting for product transfer or clean-up operations to begin, complacency may set in. Control of the perimeter may become relaxed, uncomfortable protective clothing comes off, and the incident scene may become dangerous again.

Termination Activities

Termination activities should concentrate on giving accurate information to people who need it the most. Initially, this group is a small number of on-scene emergency responders who may be briefed on signs and symptoms of a particular hazardous substance or on special recovery procedures. On larger incidents, the number of people with a need to know expands and may include the accident investigation team or representatives from contractors for other agencies.

Release of inaccurate information may have long-reaching affects. Incorrect hazard data could result in illness to those exposed, improper clean-up techniques, and unsafe disposal procedures. Failure to properly manage termination activities may also result in undesirable opinions of your organization from the public, your peers, and the news media.

The termination process is divided into three phases:

- debriefing
- post- incident analysis
- the critique.

Debriefing

The debriefing should begin as soon as the emergency phase of the operation is completed. Ideally, the debriefing should begin before any responders leave the scene. It should include the hazardous materials response team, sector officers, and other key response personnel such as public information officers. Outside agency representatives may be included in the debriefing if the incident commander

determines they have a need to know. On larger incidents, these representatives will return to their agencies and pass on essential information, including whom to contact for more information.

An effective debriefing should:

- Inform emergency responders exactly what materials were present and signs and symptoms of exposure.
- Identify damaged equipment in need of service, replacement, or repair.
- Identify equipment or expanded supplies that will require specialized decontamination or disposal.
- Identify unsafe site conditions which will impact the clean up and recovery phase. Owners and contractors should be formally briefed on these problems before responsibility for the site is turned over to them.
- Assign information-gathering responsibilities for a post-incident analysis and critique.
- Assess the need for a critical incident stress debriefing.

Debriefings should be conducted in areas free from distractions. Poor environmental conditions, such as extreme heat, extreme cold, or noisy conditions should be avoided. When distractions exist, the debriefing may be conducted in a nearby building or vehicle. The debriefing should be limited to a maximum of 20 minutes. It is intended to briefly review the incident, not analyze every action taken.

Debriefing should cover specific subjects, in the following order:

- Health information. Emergency response personnel should know exactly what hazardous material each person has potentially been exposed to and signs and symptoms of illness. Some substances may not reveal signs and symptoms of exposure for 24 to 48 hours. When appropriate, cover responsibility for follow-up evaluations and complete any written health exposure forms.
- Equipment and apparatus exposure review. Equipment and apparatus that is unfit for service must be containerized and clearly marked. Plans must then be made for its disposal as hazardous waste. Someone must be appointed to be responsible for proper decontamination of equipment that is to be reused.
- Provide a follow-up contact person. Anyone involved after the release, such as clean-up contractors or incident investigators, must have access to a single contact person who can share needed information. This contact person is also responsible for collecting and maintaining all incident documents until they are delivered to the appropriate investigator or critique leader.
- Identify problems requiring immediate action. Equipment failures, safety issues, major personnel problems, or potential legal issues should be quickly reviewed on-scene. If it's not critical, save it for the critique.

Post Incident Analysis

Post-incident analysis is a reconstruction of the incident to establish a clear picture of events that took place during the emergency. It is conducted to:

- Assure that the incident has been properly documented and reported.
- Determine the level of financial responsibility.
- Establish a clear picture of the emergency response for further study.
- Provide a foundation for the development of formal investigations, which are usually conducted to establish the probable cause of the accident for administrative, civil, or criminal proceedings.

There are many agencies and individuals that have a legitimate need for information about any significant hazardous materials incident. They may include manufacturing and shipping company representatives, insurance companies, government agencies, and citizens groups. A formal post incident analysis is one method for coordinating the release of factual information to these agencies.

The post incident analysis begins with the designation of one person (or agency) to collect information about the response. This person is usually appointed during the on-scene debriefing. The post incident analysis coordinator should have the authority to determine who will have access to information. This method guarantees that sensitive information is not released to the wrong organization or in an untimely manner. The Post Incident Analysis should focus on six key topics:

- **Command and control.** Did the first trained responder to arrive on scene establish the incident command system? Was the emergency response organized according to the existing emergency-response plan procedures? Did information pass from sector personnel to the incident commander through appropriate channels? Were response objectives communicated effectively to field personnel who were expected to implement them?
- **Tactical operations.** Did the on-scene incident commander effectively order tactical operations? Did the emergency teams implement these orders? What worked? What didn't? Were tactical operations conducted in a timely and coordinated fashion? Do revisions need to be made to tactical procedures? Do tactical work sheets need to be developed or modified?
- **Resources.** Were human and material resources adequate to conduct the response effectively? Are improvements needed to equipment or facilities? Were mutual aid agreements implemented effectively?
- **Support services.** Were support services adequate and provided in a timely manner? What is needed to increase the provision of support to a necessary level?
- **Plans and procedures.** Was the emergency response plan and associated tactical procedures current? Did they adequately cover notification, assessment, response, recovery, and termination? Were roles and assignments clearly defined? How will plans and procedures be upgraded to reflect successful and unsuccessful aspects of the emergency response?

- **Training.** Did this event highlight the need for additional basic or advanced training?

The post incident analysis coordinator should attempt to gather factual information concerning the response as soon as possible. The longer the delay in gathering information, the less likely it will be accurate and available.

Some suggested sources of information include:

- Verification of shipping documents or material safety data sheets.
- Owner/operator information.
- Chemical hazard information from checklists, computer printouts, etc.
- Audio or videotapes of the incident response.
- Photographs taken during the incident.
- Notes taken during the incident response.
- Records on levels of contamination or exposure from the decontamination or emergency medical sectors.
- Incident reports.
- Incident command charts.
- Notes from responding agencies and company representatives.
- Tape recording of radio communications.
- Videotapes or photographs taken by news media.
- Interviews of witnesses conducted by investigators.
- Interviews of emergency response personnel.

As soon practical, construct a brief chronological overview of who did what, when, and where during the incident. A simple time line placing key personnel at specific locations at different times is a good start. Once all available data has been assemble and a rough draft report developed, the entire package should be reviewed by key responders to verify that the facts are arranged properly and actually took place.

Recording and reporting of Incidents

Each emergency response organization has its own unique requirements for recording and reporting hazardous materials incidents. These requirements may be self-imposed as administrative and management controls or may be mandatory under federal or state law.

The regulatory reporting requirements for spills, leaks, and other releases into the environment are significant. These include the following:

- Section 304 of the Superfund Amendments and Reauthorization Act (SARA, Title III)

- Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- 40 CFR part 110-discharge of oil
- 40 CFR part 112-oil pollution prevention
- Any additional regional, state or local reporting requirements.

Under CERCLA, the responsible party must report to the national response center (NRC) any spill or release of specified substances in amounts equal to designated reportable quantities specified by the Environmental Protection Agency. In addition, SARA title III requires that releases be reported immediately to the national response center and local emergency planning commission.

The Critique

Many injuries and fatalities have been prevented as a result of information shared during the critique process. OSHA requires that a critique be conducted for every hazardous materials emergency response. The primary purpose of a critique is to develop recommendations for improving the emergency response system rather than find fault with the performance of individuals. A good critique promotes:

- System-dependent operations rather than people-dependent organizations.
- A willingness to cooperate through teamwork.
- Improvement of safe operating procedures.
- Sharing information among emergency response organizations.

The critique leader moderates and maintains control of the discussion. He or she is a crucial participant in making the critique session a positive learning experience. A critique leader can be anyone who is comfortable and effective working in front of a group. The critique leader should:

- Control the critique.
- Introduce the personnel involved and procedures used during the response
- Make sure that direct questions receive direct answers.
- Make sure that all participants play by the critique rules.
- Make sure that individual observations are shared with the group.

Keep the critique moving, and on schedule. Experience shows that critiques lasting longer than 60 to 90 minutes quickly lose effectiveness in quality of discussion.

Participant-level critique. After explaining rules for the critique, the leader calls on key personnel to make an individual statement relevant to his or her on-scene activities and what he or she feels are major issues needing discussion. There should be no interruption during this phase.

Sector-level critique. After determining a feel for the group, the leader moves on to a structured review of emergency operations. Through a spokesperson, each operational sector presents a summary of assigned roles during the response, challenges encountered, and unanticipated events experienced. This spokesperson may also suggest, or call for, recommendations for how their sector could improve its performance.

Group-level critique. At the end of the operation level critique, the leader moves the meeting into a wider and more open forum. The facilitator encourages discussion, reinforces constructive comments, and records important points.

As the critique draws to a close, the leader should summarize the more important observations and conclusions revealed by the participants. It is important that plans and procedures that work and don't work are identified through the critique process. This information is then used to change and improve the emergency response system.

The entire emergency response team must make a commitment to work on problems uncovered. Hazardous materials incidents are hard work and a test of everyone's personal endurance. Accentuate the positive aspects of plans and procedures that worked correctly. When problems are uncovered avoid placing blame; everyone must make a commitment to work together to improve emergency response procedures. Never end on a sour note a formal critique is designed to emphasize successful operations.

It is important that every hazardous materials incident response be formally terminated by a specific, written procedure. This process documents safety procedures, site operations, and hazards faced. The termination process allows participants to discuss elements of the emergency response plan that work and those that don't work. It also provides a record of events, which may be used to help settle liability issues. Termination procedures also provide data, which may be required to comply with federal, state, and local reporting requirements.