PRE-EMERGENCY PLANNING

INTRODUCTION

No matter how extensive and thorough loss prevention programs and procedures, management must ensure that each facility is prepared to deal with any internal or external event that can lead to an emergency at the facility. An emergency is an event that requires immediate response to limit the threat to life, property, the environment and business operations.

By anticipating and preparing in advance for any emergency that might arise, the emergency can be managed to minimize its impact. The key to successful emergency management is a pre-emergency plan that is prepared and tested before an emergency strikes.

This Property Risk Consulting Guideline provides guidance for sound pre-emergency planning, response and recovery policies and procedures. Following this guide will help organizations achieve the same level of excellence in their emergency response planning efforts that they strive to maintain in their daily business activities.

Regardless of the term used — pre-emergency planning, emergency response planning, disaster management, emergency preparedness, or emergency management — it means anticipating and planning in advance for emergencies.

Past history vividly demonstrates that actions taken to confront emergency situations are seldom effective unless they have been planned in advance. The emergency response component of management programs represents the last line of defense against what may be catastrophic consequences caused by an emergency.

The keys to successfully managing an emergency are:

- Proper response of employees when the emergency occurs;
- Actions taken to recover from the emergency and return the facility to its normal state.

To ensure proper emergency response, the actions to be taken must be carefully planned, tested, revised and practiced so they become a matter of routine.

Emergency response plans that are hastily conceived, filed and forgotten, or not followed can be far worse than no plan at all. Plans of this type do little more than create complacency before, confusion during, and economic disaster after an emergency.

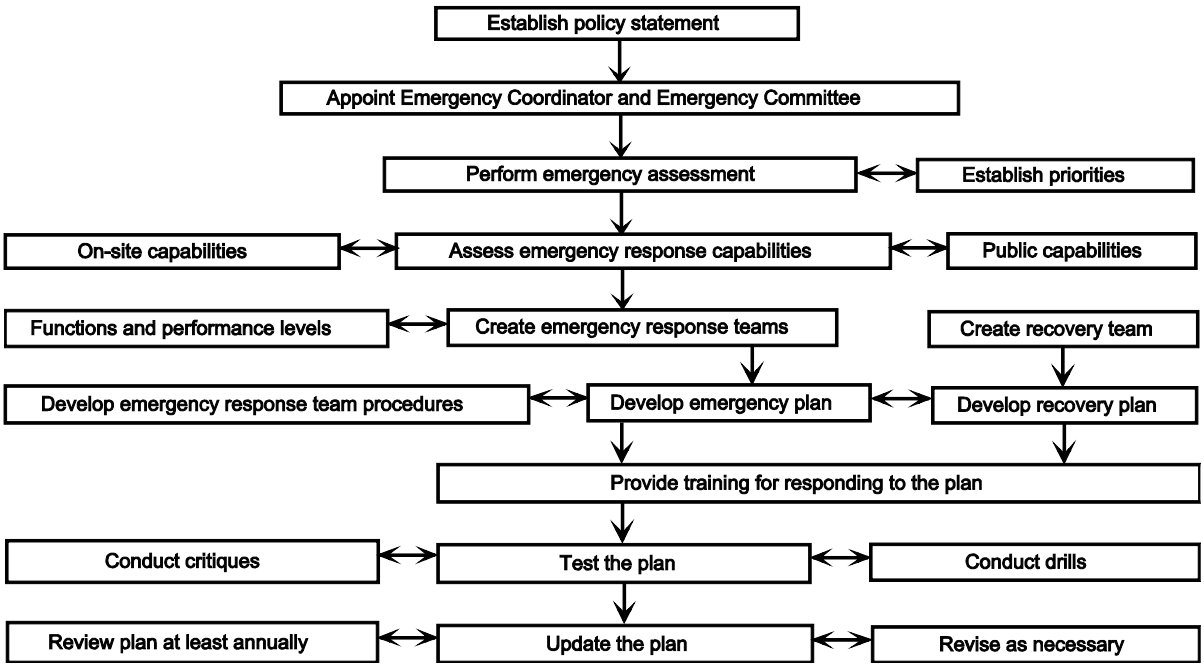

Figure 1. Steps To Create A Pre-Emergency Plan.

POSITION

Management must develop and maintain a written pre-emergency plan that clearly defines all facets of emergency response and recovery operations at the facility. Every facility is unique and encompasses a variety of site-specific hazards and potentials for emergency incidents.

Each pre-emergency plan must be site-specific. Figure 1 briefly outlines the steps necessary to create a pre-emergency plan.

To create a pre-emergency plan, follow these steps:

- Establish a written emergency response policy statement that clearly:
  - Reflects management's commitment to pre-emergency planning;
  - Defines the responsibilities and authority of the Emergency Committee;
  - Defines the goals and objectives of pre-emergency planning efforts.
- Assign the emergency response responsibilities to a qualified individual that will develop, implement, and administer the emergency response plan. (This document calls this person the Emergency Coordinator.)
- Appoint an Emergency Committee led by the Emergency Coordinator. Include key personnel from all functional areas expected to be involved with emergencies at the facility. Chose members having knowledge of the facility and the authority to commit resources from key functional areas. Additional duties include:
  - Identifying hazards and hazardous materials;
  - Identifying resources necessary for prompt recovery;
  - Keeping management informed of the latest methods of loss prevention and control;
  - Supervising and evaluating periodic property inspections;
  - Keeping the pre-emergency plan up-to-date.
- Have the Emergency Committee perform an emergency assessment to identify potential site-specific emergency situations that would affect the facility or its normal business operations.

Assess the risk of each potential emergency with regard to its probability of occurring, the consequences should it occur, and the priority for each potential site-specific emergencies.

- Have the Emergency Committee assess the facility's emergency response capabilities as well as the public-sector emergency response capabilities for handling each potential site-specific emergency.
- Organize the appropriate emergency response teams (ERTs) and recovery teams to provide the needed emergency response functions and the resources to return to full production following an emergency event. Determine the needed site-specific response functions and performance levels required for each emergency.
- Have the Emergency Committee develop a written emergency response plan that encompasses all emergency response procedures for each potential emergency. Distribute the plan to all parties expected to be involved in emergency response. Emergencies that should be addressed include:
  - Fires and explosions;
  - Natural disasters (hurricanes, tornadoes, flooding, earthquakes, winter storms);
  - Sprinkler leakage incidents;
  - Utility outages both on and off premises (water, electric, fuel, air, refrigeration, air-handling);
  - Bomb threats;
  - Riots and civil commotion;
  - Disruption of key production equipment or computer facilities (equipment malfunction and labor unrest);
  - Transportation-related accidents;
  - Other emergencies, including release of hazardous, radioactive, and molten materials.
- Have the Emergency Committee develop a written emergency recovery plan that encompasses all emergency recovery procedures for each potential emergency. Distribute the emergency response plan to all parties expected to be involved in emergency recovery operations.
- Train personnel for their assigned emergency duties.
- Test both the emergency plan and recovery response by conducting drills or exercises that simulate anticipated emergencies at least annually.
- Conduct a formal critique following each drill and actual emergency to determine:
  - Whether the pre-emergency plan worked as intended;
  - If revision to the pre-emergency plan is needed as a result of "lessons learned."
- Review the pre-emergency plan at least annually to ensure it remains current with facility needs.

DISCUSSION

Emergency Response Policy Statement

The emergency response policy statement is a critical component of any emergency plan. This statement must:

- Come from the CEO or corporate management;
- Define the goals of emergency response and restoration efforts;
- Establish confidence in the pre-emergency plan;
- Demonstrate corporate management's commitment and interest in emergency response;
- Assign responsibilities for emergency response efforts.

Emergency Coordinator And The Emergency Committee

Responsibilities for developing, implementing, and administering the facility's emergency efforts must be assigned to an individual who reports directly to facility management and has the authority to:

- Ensure that all tasks can be accomplished;
- Commit the resources required to ensure that efforts achieve the level of quality expected.

The Emergency Committee should involve personnel from all important departments. These individuals can be used to provide emergency duties in their fields of expertise.

Executive management duties:

- Approve the activation of the plan or the declaration of a disaster.
- Approve recovery expenditures, as required.
- Coordinate and issue all company related news releases to the press and media.
- Monitor all recovery activities with the business recovery team.
- Provide direction and counsel, as required.
- Manage all personnel matters and benefit programs for affected employees.
- Issue information involving employee fatalities and injuries and notifications to employee(s) families and dependents or direct that Human Resources do so. This may also include professional counseling and financial support for employees.
- Involve the legal department as necessary for review of contracts.
- Review recovery progress and status with the Board of Directors.

Engineering department personnel duties:

- Keep the Emergency Committee informed of proposed changes in buildings, processes, and major equipment.
- Maintain up-to-date plans for reconstruction of key equipment and facilities. Critical plans for unique or custom equipment should be kept off-site.
- Maintain spares for parts which are not readily available and which are essential for prompt restoration of equipment that is critical to production.
- Maintain updated drawings and load analyses for the electrical, steam, air and other utility distribution systems.

Maintenance staff duties:

- Help salvage machinery and restore utilities.
- Make immediate repairs to fire protection equipment after an incident to minimize the time any portion of the plant is without proper protection.
- Aid in setting up temporary management, financial, communications, and essential production facilities as necessary.

Production staff duties:

- Quickly report any emergency condition.
- Know the proper use of safety and fire protection equipment.
- Advise management of bottlenecks that might delay prompt resumption of production.
- Prepare work schedules for operations essential to prompt restoration of production.

Purchasing staff duties:

- Advise management of any shortage of critical materials or manufacturing supplies.
- Maintain contact with suppliers who can assist in obtaining materials essential to prompt restoration after an emergency.

- Maintain a database of outside services and resources essential to prompt restoration after an emergency.

Public relations staff duties:

- Maintain a good working relationship with the community.
- Obtain the facts and provide the media with an accurate story should an incident lead to an emergency.

In addition, personnel from the following departments should also be available:

- Human Resources
- Industrial Hygiene and Safety
- Security
- Legal
- Accounting/Finance
- Purchasing
- Information Management
- Employee Training and Development

Prior to an emergency the Emergency Coordinator should organize, staff, and equip both on-site and off-site Emergency Operations Centers.

In addition to implementing pre-emergency planning efforts within the facility, the Emergency Committee must coordinate its efforts with the emergency plans of the community. To ensure that coordination is achieved, the committee should interact with appropriate authorities such as:

- Municipal emergency planning committees
- Elected officials
- Civil preparedness/emergency management officials
- Fire and rescue services
- Emergency medical services (EMS)
- Law enforcement
- Utility suppliers
- Hazardous materials response agencies
- AXA XL Risk Consulting
- Insurance carrier representatives
- Insurance broker/agent
- Key suppliers and vendors
- Other organizations that may be involved in a facility emergency

The Emergency Coordinator ensures that all perspectives are incorporated in the emergency plan. Figure 2 shows a typical incident management system incorporating an Emergency Coordinator.

During an emergency the Emergency Coordinator is expected to:

- Keep management informed about the incident.
- Declare if an emergency exists and how serious it is.
- Mobilize initial emergency response as required by the incident.
- Continuously assess and evaluate the emergency and coordinate effort accordingly.
- Document the results of the emergency assessment(s) and evaluation(s).
- Obtain reports of personnel injury and send them to management.

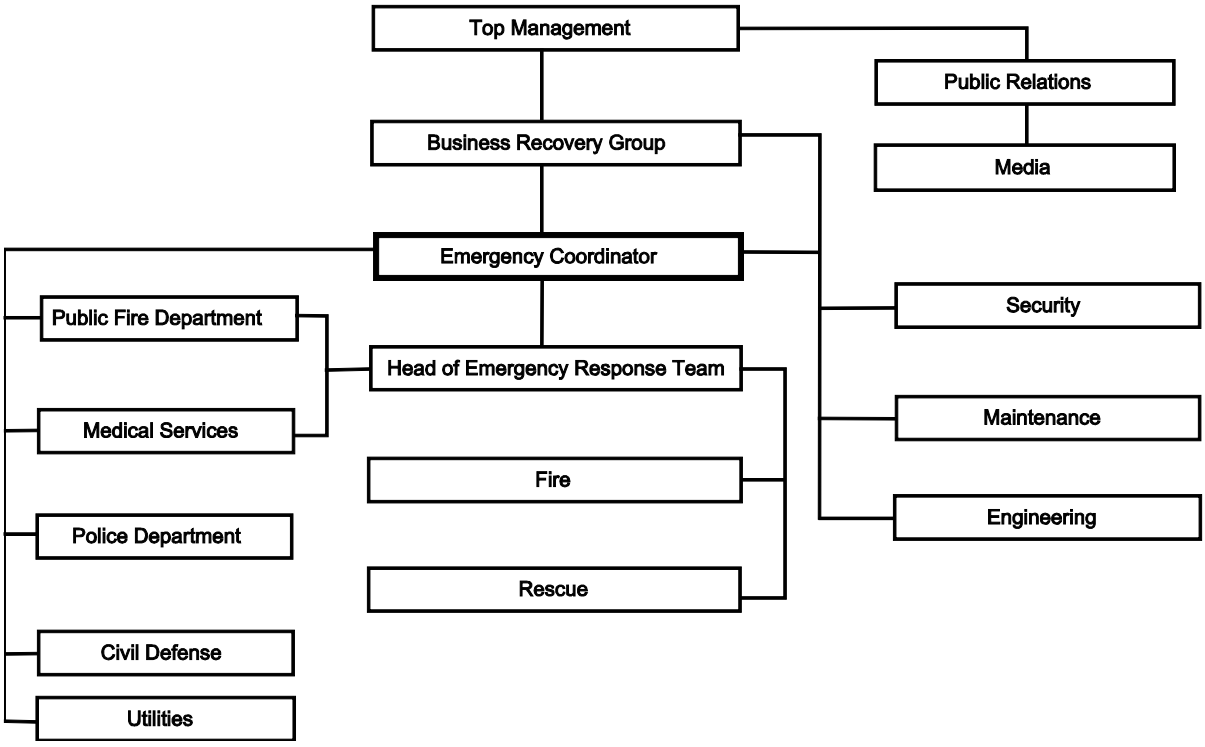

Figure 2. Typical Incident Management System Incorporating Emergency Coordinator.

If the emergency involves business operations the Emergency Coordinator is expected to:

- Establish and organize a business resumption headquarters, at an alternate site.
- Control the activation of the business resumption procedures during an emergency.
- Direct emergency response efforts.
- Alert recovery personnel and have them to report to the Emergency Operations Center.
- Provide for appropriate clerical support.
- Advise business/department managers that the plan has been activated and request that they alert their staff members and have them report to the appropriate off-site locations where they can begin the recovery process.
- Coordinate the recovery of all business functions.
- Manage all administrative activities associated with the recovery operation.
- Terminate or expand/extend the recovery operation, as directed by management.
- Ensure a complete assessment of damages and salvage operations is conducted.
- Report recovery progress and status to management.
- Coordinate the eventual restoration/relocation of the primary site.

Performing An Emergency Assessment

The Emergency Committee conducts an emergency assessment to:

- Identify each type of event that could cause an emergency within the facility;
- Assess the risk each potential event represents.

Three basic categories of events that can lead to emergency situations are:

- **Natural**. Events due to natural occurrences. They are usually a function of:
  - Geographic location;
  - Geologic and atmospheric conditions within that particular geographic region.

- **Technological**. Events due to technology events.
- **Social/Political**. Events due to the social and/or political attitudes of people.

The assessment involves answering questions like these:

- Could an incident of this type occur at the facility?
- What conditions would have to be present for this incident to occur?
- When could this incident occur?
- How frequently could this incident occur?
- How significant would the incident's impact be on:
  - Personnel in the affected area at the time of the incident?
  - Personnel who respond to the incident?
  - Property damage to the facility?
  - Business operations of the facility?
  - The economic well-being of the company?
  - The community?
  - The environment?

Use an emergency assessment worksheet like the one shown in PRC.1.7.0.A to evaluate each event that could occur at the facility and to assign a probability rating and a consequence rating of its occurrence.

The following terms or numerical ratings could express the probability:

- Cannot happen (1)
- Occurs very rarely (2)
- Likely to occur (3)
- Occasionally occurs (4)
- Frequently occurs (5)

The consequence could be expressed by the following terms or numerical ratings, along with a brief description of the event's effect on business:

- None (1)
- Negligible (2)
- Moderate (3)
- High (4)
- Catastrophic (5)

Prioritize the events. Planning efforts should start with events that would have the most serious consequences. One method of prioritizing the events is to multiply the probability by the consequence. The events with the highest numbers might have the highest priority.

In addition to the events that have been previously identified, the Emergency Committee should identify areas that present specific problems in recovery operations.

Assess Emergency Response Capabilities

The minimum emergency response by the ERTs dealing with hazardous materials and fire events should include:

- Hazardous Materials — Personnel perform defensive operations from outside of the zone of greatest risk.
- Fire suppression — Personnel fight fires that can be extinguished with portable extinguishers and inside hose connections.

Many industrial/business facilities need to respond at higher levels than identified above. In such cases, base the response level on the emergency assessment and the performance level requirements and limitations.

Facilities that require an ERT to provide hazardous material response must be trained to the hazardous materials technician level. This is usually necessary when:

- No public agency provides these services;
- The response time of the community's Haz-Mat response agency is longer than 10 min;
- The public Haz-Mat response agency cannot guarantee the presence of at least four Haz-Mat technicians, an incident commander, and proper support people at any time of day or night;
- The hazardous materials in the facility are such that the public Haz-Mat response agency cannot respond fast enough to control an incident before it reaches major proportions;
- The facility relies heavily on manual fire suppression;
- The public response agency does not have the expertise required to deal with the hazards and the materials used in the facility;
- The public response agency is not adequately equipped to deal with a major Haz-Mat incident in the facility;
- The community's Haz-Mat response agency cannot guarantee that a response to the facility will take precedence over other responses in the community.

Facilities that require an ERT to provide fire suppression at an advanced level of capability are those where:

- The facility has established an on-site hazardous materials response team trained to the Haz-Mat technician level;
- There are no municipal fire department services in the area;
- The facility's fire protection relies heavily on manual fire suppression;
- The fire department cannot arrive soon enough to control the fire in the hazards at the facility;
- The fire department is not adequately equipped to deal with an advanced fire at the facility;
- The fire department cannot guarantee a minimum response at all times of at least two engines, six firefighters, and a command officer;
- The fire department does not have the expertise or specialized equipment required to deal with the hazards at the facility;
- The fire department does not maintain up-to-date pre-fire plans or standard operating procedures for dealing with fires at the facility.

Establishing Levels Of Emergencies

While all emergencies require prompt response and action, not all emergencies represent the same level of potential consequences. A comprehensive emergency plan should establish categories or levels of emergencies to ensure that the response is sufficient to deal with each level of emergency. The plan should provide for upgrading each response if the emergency escalates.

There are no standard methods for establishing levels of emergencies. Each facility must determine a method that best suits its own needs. The following is one suggested:

Level 1 Emergencies. This is the lowest category of emergencies. And is usually confined to the point of origin. Because of their nature, Level 1 emergencies require a limited level of on-site emergency response.

Level 2 Emergencies. This level of emergency is more serious than Level 1 and results in an emergency that affects a portion of the facility.

Level 3 Emergencies. This level is more serious than Level 3 and affects the entire facility.

Level 4 Emergencies. This is the most serious level of emergency. Level 4 emergencies affect not only the facility, but also the community in which the facility is located.

Creating Emergency Response Teams

The head of the ERT in concert with the Emergency Committee is responsible for maximizing the safety of personnel while ensuring that emergency incidents are managed effectively and efficiently. This is accomplished by creating the necessary ERTs. For additional information on ERT structure, personnel roles, staffing and performance see PRC.1.7.0.2.

The head of the ERTs in concert with the Emergency Committee must determine how employees are to respond to emergencies when they occur in the facility. To accomplish this, they must:

- Conduct an emergency response needs assessment of the facility based on the site-specific hazards and conditions.
- Identify the emergency response functions needed to deal with anticipated emergencies.
- Evaluate the emergency response functions available from public agencies.
- Establish which emergency response functions the facility must provide and maintain to deal with site-specific emergencies.
- Establish the performance levels required for each of the emergency response functions identified.
- Organize, train and equip ERTs to perform their functions as planned.

The head of the ERT should:

- Ensure that the organization of each ERT is based on the site-specific needs of the facility.
- Determine if the ERT is to respond to:
  - Site-specific emergencies on-site only;
  - Site-specific emergencies both on-site and off-site.
- Develop a written ERT organizational statement that includes:
  - The basic organizational structure of the ERT;
  - The expected number of members on the ERT;
  - The emergency response functions and the levels at which the team members are expected to perform;
  - The type, amount, and frequency of training provided to team members;
  - The shifts during which the ERT is expected to be available;
  - Other factors that define limits of the activities of the ERT.
- Define the duties and responsibilities of:
  - ERT Leaders
  - Team specialists
  - Team members
  - Support members
- Establish the job-related medical and physical requirements for ERT members.
- Establish the use of control zones - hot, warm, and cold - to define the operational limits of ERT members. Operations in each zone are to be based on:
  - The medical and physical capability of ERT members;
  - The skills and knowledge levels of ERT members;
  - The personal protective equipment available to ERT members.
- Assign the site-specific duties to ERT members based on:
  - The emergency response function;

- The performance level.

- Adopt the incident management system to be used by the ERT. For additional information on incident management systems requirements for ERTs and public agencies see PRC.1.7.0.2.
- Establish lines of authority and assign responsibilities to ensure compliance with the ERT organizational statement.
- Adopt performance standards for the training and education of ERT members.
- Develop written emergency action plans for all anticipated events.
- Ensure that all ERT personnel are proficient in their duties.
- Appoint an ERT training coordinator.
  - Conduct training frequently enough to maintain the skills and knowledge of ERT members.
  - Maintain individual training records for each member.
  - Conduct drills to evaluate ERT performance at least annually.
- Appoint an ERT Safety Coordinator.
- Provide ERT communications to:
  - Alert ERT members to respond to an emergency.
  - Provide communication between members during emergency.
- Select and provide ERT members with the appropriate personal protective equipment:
  - Thermal protective clothing for advanced fire suppression team;
  - Chemical protective clothing for Haz-Mat Response Team;
  - Liquid splash-protective clothing;
  - Vapor-protective clothing;
  - High temperature-protective clothing;
  - Self-contained breathing apparatus;
  - Other equipment needed to perform the emergency response function(s) at the specified performance level(s).

The Emergency Committee in concert with the head of the ERT should determine what standard operating procedures (SOPs) are needed by the responding ERT personnel. SOPs are written directives that explain standard courses of action that are to be taken under certain sets of circumstances. They also define the responsibilities and limitations of people with regard to the procedures.

Based on the current ERT standards and regulations the ERT:

- Uses the pre-emergency plan on all incidents and drills. The plan should:
  - Define the roles and responsibilities of ERT personnel;
  - Define roles and responsibilities of off-site emergency response personnel;
  - Utilize an ERT member accountability system;
  - Utilize a risk management policy to define ERT limitations;
- Develops SOPs defining the site-specific functions and limitations of ERT members;
- Bases the a risk management policy on the following:
  - Some risk to the safety of ERT members is acceptable when there is a potential to save human lives;
  - Minimal risk to the safety of ERT members is acceptable where there is a potential to save endangered property;
  - No risk to the safety of ERT members is acceptable where there is no possibility of saving lives or property.

- Follows operational safety requirements:
  - ERT members must use personal protective equipment and respiratory protection required by the control zone in which they are to perform assigned duties.
  - A team must use control zones for all emergency operations.
  - Members must operate in teams of 2 or more when operating in the hot zone.
  - When a team is operating in the hot zone, a rapid intervention or safety team trained and equipped to the same performance level must standby in the warm zone to assist the team in the hot zone if needed.
  - Experienced members should oversee the activities of less experienced members.
- Does not assign duties to any member not qualified for them.

Specialized ERT member functions include the following:

Personnel Evacuation. This specialized member is responsible for:

- Assisting in the orderly evacuation of personnel from the incident area;
- Conducting a primary search to ensure that all personnel have evacuated the area.

Electrical Power Control. This specialized member is responsible for:

- Controlling the electrical power in the incident area or the facility;
- Ensuring that vital fire protection equipment remains in service during the incident;
- Controlling emergency lighting;
- Ensuring that powered smoke control systems remain in service;
- Shutting down fans or operating ventilation equipment in accord with standard operating procedures or as required by the incident commander.

Utility Control. This specialized member is responsible for:

- Controlling facility utilities such as steam, water, natural gas, and other utilities in the incident area.
- Being a valuable resource to on-site and off-site emergency personnel.

Security/Surveillance/Communications System Control. This specialized member is responsible for:

- Maintaining control of the alarm system.
- Responding to alarm signals.
- Communicating alarm system status changes to ERT members.

Sprinkler System Control. This specialized member is responsible for:

- Operating sprinkler system control valves during the incident;
- Maintain control of the sprinkler system(s) in the incident area;
- Ensure that all sprinkler systems are restored promptly after an emergency.

Fire Pump Control. This specialized member is responsible for:

- Ensuring that any automatic pumps have started and are operating properly;
- Starting any manual fire pumps;
- Opening the fill lines to refill the fire pump reservoirs or suction tanks;
- Monitoring the operation of fire pumps until the incident commander decides they can be shut down;
- Standing by to restart the fire pumps if needed until the incident is terminated;
- Monitoring the fuel levels in the fire pump driver fuel tanks and arranging for emergency refilling if necessary during the incident;

- Returning the fire pumps to automatic mode and having the fuel tanks refilled after the incident.

Coordination with Public Fire Department

The head of the ERT should invite the public response agencies to visit the facility to ensure that facility efforts are coordinated with public emergency response agency efforts. These agencies include the local Fire Department, Emergency Medical Services, Haz-Mat Response Team, and Rescue Services.

The head of the ERT should ensure that at least on an annual basis personnel from the first responding fire departments or first responding fire companies visit the facility to coordinate their pre-fire plans and standard operating procedures with the facility's emergency response plan. In areas protected by career or full-time fire departments, visits should include personnel from all shifts. In areas protected by volunteer fire departments, make visits when the volunteers are available.

The objectives of fire department visits are to:

- Establish a solid working relationship and a level of trust between fire department personnel and facility personnel;
- Ensure that in the event of an emergency within the facility, a unified incident command structure will be used;
- Familiarize firefighters with the following characteristics of the facility:
  - Layout;
  - Construction;
  - Occupancy;
  - Location and operation of fire protection equipment;
  - Location of fire protection control valves;
  - Utility shutoffs;
  - Other protective features of the facility.
- Point out site-specific conditions that may affect firefighting operations;
- Review the response route the fire department will take to the property;
- Determine which entrance the fire department will use to enter the facility and where apparatus staging areas are to be set-up;
- Ensure that the firefighters understand the facility's emergency response plan and the roles and responsibilities of facility personnel during an emergency.

Of particular importance is making sure that the fire department's pre-fire plan for the facility and the department's procedures require that:

- One of the first arriving engines connects to the proper fire department connection(s) to maintain at least 150 psi (10.3 bar) to operating sprinkler systems.
- Operating automatic sprinkler systems are not to be shut off until the person in command of the incident is sure the fire is completely extinguished. Fear of excessive water damage should not prompt premature closing of sprinkler control valves.
- If the fire department is to assume the role of incident command once it arrives at the facility, develop procedures to ensure a proper transfer of command.
- Make arrangements for joint training of the facility emergency response team and fire department personnel. These sessions should consist of mock emergencies to help develop patterns of cooperation between the groups.

Develop Emergency Action Plans

A key component of the Emergency Committee is preparing the emergency action plans for various emergency events. While most emergencies have to be addressed during or after an event, some

emergencies allow time for precautions to be put in place before an incident, such as a predicted storm. In those cases the emergency action plans should outline the precautions to be taken before the emergency.

Examples of emergency action plans for many events are detailed in PRC.1.7.0.1. These include the following procedures:

- General emergency
  - Emergency reporting
  - Property conservation (salvage)
- Fire protection equipment
  - Impairment
  - Fire protection equipment restoration
  - Sprinkler leakage
- Fire
  - Response
  - Recovery
- Hazardous materials
  - On-site incident
  - Transportation-related incident
- Natural event (flooding, winter storm, hurricane, earthquake, etc.)
  - Preparation
  - Response
  - Recovery
- Utility outage
  - Preparation
  - Response
  - Recovery
- Terrorism/bomb threat
- Civil disturbances
- Labor unrest

The Emergency Communications System

A vital part of managing emergencies is being able to communicate with all necessary parties, both on-site and off-site. Emergency communications systems include automatic fire alarm systems, internal public address systems, paging systems, stationary and cellular telephones and two-way radio systems. Regardless of the system used at a facility, the emergency communications system:

- Permits rapid communication to all employees during an emergency;
- Alerts the on-site emergency response team(s) to respond;
- Alerts employees to evacuate;
- Notifies appropriate outside emergency response agencies.

To be effective, emergency communications systems should:

- Use a paging or public address system if available.
- Keep emergency signals distinct from other types of signals.
- Use coded signals if emergency signals are audible only.
- Confirm that the appropriate public agency has been notified of the emergency, even if the signals are automatically transmitted.

Emergency Resource Database

Regardless of the facility or its location, the telephone is a major component of the emergency communication system. The Emergency Committee should develop and maintain a current emergency resource database of employees, contractor and services with the following information:

- Name
- Address
- Telephone number (business and emergency)
- Fax number
- Email address
- Function
- Billing procedure
- Type of emergency to be notified for
- At what level of the emergency to notify
- Alternate sources of assistance (backups)

Table 2 in PRC.1.7.0.A can be used to develop this list. In addition, key facility personnel should be added to the database. Establish the priority with which they are to be notified, depending on the type and level of emergency.

Special attention must be given to ensure that key personnel from departments that are expected to respond to emergencies can be reached at all times, including holidays or facility shutdown periods.

Loss Accounting, Adjustment And Restoration

When an emergency resulting in property damage or business interruption occurs, procedures should be in place for loss accounting and adjustment. The Finance or Accounting representatives should:

- Immediately notify AXA AXL Risk Consulting and any insurance carrier involved.
- Appoint an individual to maintain all records of information relative to the loss. This individual should:
  - Develop and maintain comprehensive accounting records of costs associated with the loss such as labor, materials, and outside contractors' charges.
  - Find out what the claims adjuster and the loss investigators need to know to thoroughly assess the loss.
  - Help the adjuster establish the dollar amount of the loss.
- Document all claim-related costs.

Handling Emergencies From An Off-Site Location

In the event of an emergency that jeopardizes the normal operations center, the facility's Emergency Committee should assemble in an off-site emergency operations center (EOC) established by the Pre-Emergency Plan. The EOC may be located permanently in a structure or may be mobile in a vehicle or a trailer.

The Emergency Plan should not only establish an EOC but should also define the criteria under which the EOC is to be activated during an emergency. To be effective, an EOC should:

- Be located outside any potential emergency area.
- Have standby power in the form of an engine-driven generator adequate to meet all of the electrical power needs of the EOC.
- Limit access to those personnel responsible for managing the emergency.
- Be equipped with all of the resources and materials required for the proper management of any anticipated emergency. These should include:
  - Desks, tables and chairs;

  - Communications equipment such as telephones (cellular), two-way radio, fax, computer;
  - A copy of the pre-emergency plan;
  - A copy of all emergency procedures;
  - An emergency resource/phone numbers list;
  - A library of reference materials that may be needed;
  - Facility plans, including all utilities;
  - Local maps;
  - An AM/FM radio, television, and weather radio;
  - A copy of the AXA XL Risk Consulting diagram of the facility;
  - Other resources that may be needed.
- Be equipped with some means of initiating internal alarm signals, a paging system, a radio base station, and portable two-way radios.
- Have up-to-date facility layouts showing:
  - Evacuation routes and exits;
  - Locations of automatic and manual fire extinguishing systems;
  - Locations and functions of fire protection control valves;
  - Fire hydrants and hose connections;
  - Fire walls, fire barriers, and fire doors;
  - Hazardous operations;
  - Utility layouts;
  - Locations of hazardous materials.

Developing A Recovery Plan

Depending on the extent of damage it may be prudent to initiate recovery procedures at the onset of the emergency. Just like the emergency response plan, a recovery plan must be in place to cope with the various emergencies that could occur.

Serious emergencies require that the emergency recovery team assemble to manage the facility while the emergency is being dealt with. Include on this team key decision-makers from each of the major departments of the facility. Their role is to provide staff support to the Emergency Coordinator and to maintain oversight of their particular areas of responsibilities. Personnel on the emergency recovery team should include people with the following functional responsibilities:

Marketing duties:

- Provide continual management of all company marketing programs.
- Complete client notification in a prioritized fashion (telephone, fax, letter, etc.).
- Manage and control all notifications to clients throughout the recovery operation.
- Prepare sample letters for client notification, including requests to resubmit data.

Purchasing duties:

- Coordinate the ordering, shipment and delivery of equipment, forms, and supplies.
- Ensure the retrieval and transfer of information and data files.
- Control the movement of equipment and supplies from primary site to alternate sites.
- Coordinate the transportation of company personnel to/from alternate sites.

Building services duties:

- Manage and support requirements for word processing, desktop publishing, print shop services, mail room, supplies, graphics, and microfilming.

- Contact local telecommunication vendors.
- Replace any damaged telecommunications equipment required.
- Manage restoration of telecommunications at primary site.
- Manage installation of emergency lines and equipment at all alternate backup sites.

Information systems duties:

- Identify and retrieve all software backup files.
- Notify alternate backup sites and/or vendors of disaster declaration.
- Identify and retrieve all backup files from off-site storage, as necessary.
- Go to alternate mainframe site, if necessary.
- Establish data communications with mainframe, if necessary.
- Execute mainframe recovery procedures.
- Manage restoration of mainframe computer operations at primary site.
- Replace any PC/LAN damaged hardware and software.
- Restore PC/LAN communications to end user location.
- Execute PC/LAN network recovery procedures.
- Manage restoration of PC/LAN operations.
- Go to alternate data communications site, if required.
- Execute mainframe data communications recovery procedures.
- Manage restoration of data communications network operations at primary site.
- Replace any damaged WAN hardware and software.
- Restore communications to WAN user locations.

Other Business Recovery Considerations

When planning for recovery from an emergency the following items should also be considered:

- Pertinent records;
- Critical computer software back-ups;
- Critical accounting information;
- Raw materials information;
  - Specifications
  - Anticipated delivery times
  - Minimum quantities required
- Inventories of machinery, jigs, tools and fixtures;
- Specifications for finished products;
- Inventories of stock on order and on hand;
- Requirements for skilled labor in manufacturing operations;
- Procedures and specifications for use and construction of testing equipment;
- Records of design data, production engineering procedures, and change orders;
- Plant engineering data on building and utilities;
- Specifications, drawings, and patterns of custom-made machinery and equipment;
- Memory media for data processing and digitally controlled production equipment;
- Storage methods used to protect records from fire, flood, and windstorm;
- Maintenance of duplicate records at another location;
- Availability of suitable, adequately protected temporary building space for use if needed;

- Custom-built, imported, or complex machinery or equipment;
- Suitability and availability of substitute machinery;
- Availability or stockpiling of critical parts;
- Availability of alternate business facilities for use on a temporary basis;
- An up-to-date analysis of the facility's electrical distribution system, load centers, and private power generators. Consider any large or special equipment that may take a long time to repair or replace;
- Major heating and process units which if lost could represent a critical threat to operations. Investigate the availability of rental boilers;
- Impact presented by loss of vital computer equipment:
  - Explore a contractual agreement for the emergency use of external facilities or computer service bureaus.
  - Explore availability of replacement of equipment.
- Raw materials, parts, or components that are imported, dependent upon seasonal crops, or otherwise not readily available:
  - Explore use of temporary substitutes.
  - Explore availability of goods at premium prices.
- Explore subdivision of storage facilities into separate areas not subject to damage from the same incident.

Training And Education

All training and education efforts related to emergencies at the facility should be based on the emergency action plan and the ERT SOPs. The information contained in these documents identifies the minimum required knowledge and skills to respond to and recover from emergencies at the facility.

The skills and knowledge required by employees depend on their assigned emergency response/recovery duties. Skills are acquired through hands-on training, while knowledge is acquired through education.

To be effective, emergency response or recovery training and education must:

- Be based on the facility's site-specific emergency plan and ERT SOPs.
- Define the duties and responsibilities of personnel with regard to the emergency plan.
- Define lines of authority and assigned responsibilities of all personnel involved in emergency response or recovery operations.
- Be based on the tasks personnel are expected to perform related to emergencies.
- Be based on performance standards of specific competencies that are measurable.
- Explain the use of control zones for emergency response.
- Explain the incident management system (IMS) used within the facility.
- Explain emergency communications within the facility.
- Explain the equipment personnel are expected to use during an emergency within the facility.
- Be frequent enough to maintain the skills/knowledge of employees.
- Be documented for each employee involved in emergency response or recovery.

As a service to our customers, AXA XL Risk Consulting offers in-house, on-site, and web-based training programs.

For additional information on resources for dealing with emergencies, see PRC.1.7.0.3.

Testing The Plan

Once an emergency plan has been developed, it must be tested to ensure that it produces the anticipated results. Pre-emergency planning efforts can be totally wasted unless the plan is tested to verify that the anticipated results are achieved. Emergency plans are tested when an exercise is held to test and the plan is evaluated, or when an emergency occurs. Drills or exercises arranged to thoroughly test every component of the emergency plan under simulated emergency conditions are usually far more forgiving than actual emergencies.

Most regulations and standards related to emergency response planning require that a drill or exercise be conducted at least once per year for the purpose of evaluating the plan. However, exercises to test the various components of the overall plan should be conducted in conjunction with training and education sessions for personnel involved in the plan. Training and education efforts are intended to improve performance. Without a test of the performance of people when confronted with an emergency, there is no method to determine what knowledge or skills need to be covered in current or future training sessions.

To be effective, drills or exercises should:

- Emphasize the safety of personnel involved and spectators.
- Be based on a realistic emergencies that are likely to occur within the facility.
- Involve all on-site and off-site agencies and personnel expected to respond to such emergencies.
- Should not be so complex that the major purpose of the drill is lost.
- Recognize mistakes so they can be corrected with training and education.
- Use evaluators who are familiar with of the facility's plan and SOPs and who are not responsible for developing either. They should be able to evaluate performance if these documents are clearly written.

Critiquing The Plan

Another major component of the pre-emergency planning process is a critique to evaluate how well the emergency plan works. Critiques must be performed after every emergency incident and drill to evaluate how well the emergency plan worked and to identify any changes or revisions that are needed to improve on the performance of those parties involved.

An organized critique should take place at a scheduled time and place where all parties involved with the emergency or drill can attend. While critiques of minor emergencies may be held as soon as the emergency has been terminated and recovery operations completed, critiques of major emergencies and drills should be held days later when personnel are rested and clear-headed.

Each party involved should report from their perspective as to how well the operations went and whether or not the emergency response or recovery portion of the plan needs revision. Any lessons learned from the incident should be identified and used as the basis for plan revisions.

Questions Related to the Emergency

- What caused the emergency?
- Could this emergency have been prevented? If so, How?
- What contributed to the severity of the emergency?
    - How could the degree of damage been reduced?
    - What could have been done to restore operations better?
- Has the emergency revealed deficiencies in any of the following:
    - Construction
    - Protection
    - Employee performance

  - Coordination with public agencies
  - Restoration of fire and other protection systems
  - Restoration of production
  - Equipment design, application and use
- What actions need to be taken to prevent similar emergencies?

Questions Related to the Emergency Plan

- Did the plan:
  - Properly anticipate the incident?
  - Provide a proper response and recovery to the incident?
  - Are any modifications to the plan needed to improve response or recovery operations?
- Did the plan work as intended?
  - If not, why not?
  - How does the plan need to be changed?
- Did the emergency response/recovery procedures accomplish what was intended?
  - If not, why not?
  - Is there a problem with the procedures or is there a problem with people not following procedures?
  - What needs to be done to correct any identified problem with procedures?
  - Do the procedures need to be revised, or additional procedures developed?
- Did the incident management system work as intended?
  - If not, why not?
  - What was the problem(s) related to the incident management system?
  - What needs to be done to revise the incident management system?

Plan Review And Revisions

The final component of pre-emergency planning is reviewing and revising the plan. At a minimum, any emergency plan must be thoroughly reviewed and revised as needed at least annually to ensure that the plan remains current and adequate to meet the facility's needs. In addition, the emergency plan should be reviewed:

- After each emergency,
- After each pre-emergency planning exercise or drill,
- Before any change that affects pre-emergency planning, response or recovery is made at the facility.
- When the community's local emergency plan is revised.

In cases where a review indicates that revisions to either the emergency plan or the emergency response and recovery procedures are needed, the revisions should be promptly developed and distributed to all parties who hold copies.

EMERGENCY ASSESSMENT AND RESOURCES

TABLE 1
Emergency Assessment Worksheet

EVENT	Probability	Facility/Business Consequence	Priority Ranking
Natural Events:			
Flooding			
Tropical Storms			
Hurricane			
Typhoon			
Cyclone			
Tornado			
Earth Movement			
Earthquake			
Tsunami			
Landslide or mudslide			
Sinkhole			
Land subsidence			
Volcanic Eruption			
Cold Weather Emergencies			
Arctic Freeze			
Winter Storm			
Blizzard			
Snow			
Ice			
Avalanche			
Hot Weather Emergencies			
Extreme Heat			
Drought			
Severe Thunderstorm			
Dust or sand storm			
Hail			
Wildland Fire			
Technological Events:			
Fire Protection Impairments			
Hazardous Materials Incidents			
Within the facility			
Adjacent to the facility			
Structural Fire			
Within Facility			
Exposure from Urban Fire			
Explosion			
Medical Emergency Events			
Single Victim			
Mass Casualty Incident			
Rescue Events			
Confined Space			
High Angle			

TABLE 1 (Cont'd.)
Emergency Assessment Worksheet

EVENT	Probability	Facility/Business Consequence	Priority Ranking
Trench			
Entanglement			
Entrapment			
Vehicle Accidents			
Highway			
Airport/Heliport			
Navigable Waterway			
Flooding (impounded water)			
Utilities Shortages/Outages			
Power			
Fuel			
Water			
Resource shortages			
Raw materials			
Process materials			
Structural Collapse			
Sprinkler Leakage			
Machinery Failure			
Molten material release			
Air Pollution			
Water Pollution			
Business Interruption			
Social/Political Events:			
Domestic Disturbances			
Civil Disobedience - Protests			
Civil Commotion			
Rioting			
Workplace Disturbances			
Labor Disputes			
Strike			
Walkout			
Workplace Violence			
Acts of Aggression			
Terrorism			
Sabotage			
Bomb Threats			
Hostage Situations			
Enemy Attack			

TABLE 2
Emergency Resources

Construction services and supplies:	
	Building demolition
	Emergency lighting suppliers
	Equipment rental
	Lumber yard
	Refrigerated trailer rental
	Snow removal
	Structural engineer
Emergency communications:	
	Citizens' band radio club
	Ham radio club
	Telephone company
Emergency equipment:	
	Breathing apparatus service
	Sump pumps
	Heaters and/or heating boilers
	Cooling towers
	Generators
Fire protection equipment:	
	Alarm service
	Automatic sprinkler contractor
	Guard service
Governmental agencies:	
	Local government officials:
	Airport
	Building inspector
	City Clerk
	City Engineer
	City Manager
	Public Works
	Electrical inspector
	Emergency Management
	Health department
	Highway department
	Mayor
	Medical Examiner
	Police
	Post Office
	Superintendent of Schools
	Transit Authority
	State/Provincial Agencies:
	Civil Air Patrol
	Department of Transportation
	Environmental Protection Agency
	Federal Aviation Administration
	Federal Bureau of Investigation
	Federal Communications Commission

TABLE 2 (Cont'd.)
Emergency Resources

State/Provincial Agencies: (Cont'd.)	
	Nuclear Regulatory Commission
	Occupational Safety and Health Administration
	Small Business Administration
	U.S. Army Corps of Engineers
	U.S. Coast Guard
	U.S. Department of Agriculture
	U.S. Division of Forestry
	U.S. Marine Corps Reserve
	U.S. National Guard
Hazardous Materials:	
	CHEMTREC (transportation accident)
Humanitarian Needs:	
	American Red Cross
	Clergy
	Fire department
	Fire marshal
	Food
	Portable toilet suppliers
	Portable shelters
	Potable water suppliers
	Salvation Army
Insurance:	
	Insurance broker
	Insurance company claims adjuster
Loss Prevention Services:	
	AXA XL Risk Consulting Impairment Hotline – RSVPhone +1 800 243 8222, +49-69-66127-8222, or +1 972-383-7161
Media:	
	TV
	Radio
	Newspapers
Medical:	
	Ambulance service
	Hospital
	Physician
	Poison Control Center
Restoration Services:	
	Salvage companies
	Document restoration
	Electronic media restoration
	Smoke deodorizer companies
	Smoke and water cleanup
Terrorism:	
	Bomb search and disposal squad
Transportation:	
	Automotive rental
	Boat
	Buses

TABLE 2 (Cont'd.)
Emergency Resources

Transportation: (Cont'd.)	
	Dump truck rental
	Four-wheel drive vehicles
	Helicopters
	Refuse haulers
	Snowmobiles
	Tow truck service
Utilities:	
	Air compressor rental
	Boiler rental
	Electric company
	Electric generator rental
	Fuel supply distributors
	Gas company
	Water department
Miscellaneous:	
	Attorney
	Authorized boiler/vessel inspection agency