APELL

AWARENESS AND
PREPAREDNESS FOR
EMERGENCIES AT
LOCAL
LEVEL

A PROCESS FOR RESPONDING TO TECHNOLOGICAL ACCIDENTS

UNITED NATIONS ENVIRONMENT PROGRAMME

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UNEP

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UNITED NATIONS ENVIRONMENT PROGRAMME

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EXECUTIVE SUMMARY

IN late 1986, following various industrial accidents that occurred in both highly industrialized and industrializing countries, resulting in adverse impacts on the environment, the United Nations Environment Programme (UNEP) suggested a series of measures to help governments, particularly in developing countries, minimize the occurrence and harmful effects of chemical accidents and emergencies. In particular, even if it is believed that all industrial accidents are preventable, one must be realistic enough to prepare response plans in the event that such accidents occur. Such preparation should lead to a better understanding of local hazards, and thus to preventive actions.

In this context, the UNEP Industry and Environment Office has developed, in co-operation with industry, a Handbook on Awareness and Preparedness for Emergencies at Local Level (APELL), designed to assist decision-makers and technical personnel in improving community awareness of hazardous installations, and in preparing response plans should unexpected events at these installations endanger life, property or the environment. UNEP is aware that in all countries as well as internationally, provisions are made for emergency planning for natural as well as for technological disasters and accidents. This Handbook is not intended to replace or interfere with such provisions of national law or of national and international activity, but rather to increase generally the knowledge of such provisions, responsibilities and activities.

IN a first introductory chapter, the background, the approach and the scope of the APELL Process are presented. The thrust in this Handbook is directed at the local level, since recent evidence shows that the extent of an accident's impact depends heavily on the immediate response to an emergency at the plant site and at the local level. APELL also recognizes the role of state or federal levels of governments in setting national goals, priorities or regulations and in providing the support and resources that local communities need.

This Handbook is designed to address and respond to the emergency events associated with any industrial or commercial operation as the result of fire, explosion, spills or release of hazardous materials. However, it has not been the intention to address emergencies related to nuclear energy or military activities.

This Handbook provides the basic concepts for the development of action plans based on local community awareness of potential dangers, and the preparation of emergency response plans at the local level, as well as an overall framework of the organizational structure. Although the objectives remain unchanged, the tools suggested are flexible, and the mechanics of the operation can be adapted to specific local conditions and requirements.

IN the second chapter, the main objectives and the basic concepts of the APELL Process are described: the overall goal is to prevent loss of life and property, and to ensure environmental safety in the community. Two basic approaches are used: (i) to increase knowledge in the community about the possible risks and hazards in the area, and (2) to develop, on the basis of this information, co-ordinated emergency response plans.

At the local level there are three very important partners who must be involved if APELL is to succeed:

- Local authorities: these may include province, district, city or town officials, either elected or appointed, who are responsible for safety, public health and environmental protection in their area.
- Industry: industrial plant managers from either state-owned or private companies are responsible for safety and accident prevention in their operations. They prepare specific emergency preparedness measures within the plant and establish review of the industrial plant's operation. But their responsibilities do not stop at the fence. As leaders of industrial growth and development, they are in the best position to interact with local authorities and leaders, to provide awareness on how the industrial facility operates, and on how it could affect its environment and to help prepare appropriate community response plans in the event of an emergency. The involvement and active participation of the work force is also important.
- Local community and interest groups, such as environmental, health, lay care, media, and religious organizations, and leaders in the educational and business sectors that represent the concerns and views of their constituents in the community.

At the national level, governments have an important role to provide the co-operative climate and support under which local participants can achieve better preparedness. Through leadership and endorsement, national authorities should foster participation of everyone at the local level. Industry associations should also get involved.

There are other partners: the APELL Process is designed so as to harmonize with other initiatives and efforts in reducing risk and hazards as well as their consequences.

THE third chapter explains how to start the APELL Process. Local authorities, community leaders and industrial representatives need to build a bridge for co-operation among all partners at the local level. This can be done by formation of a Co-ordinating Group to provide close and direct interaction between industry, the local community and the community leaders. All groups with an interest in the planning process should be included. The Co-ordinating Group will be the focus for a unified and co-ordinated approach to emergency response planning and communication with the community. This Group has the responsibility to gather facts and opinions, assess risks, establish priorities, evaluate approaches and generally organize the personnel in the community and the resources available to produce emergency response as part of overall emergency preparedness.

Any group can be the catalyst to initiate the APELL Process and to establish the Co-ordinating Group. Once this has been done a "leader" should be selected whose primary responsibility will be to conduct the Group's efforts through the various phases of the work which will be described in the following chapters.

THE fourth chapter deals specifically with community awareness. It refers first to the need for and the right of the local community to be informed about and to participate at all times in response planning for hazardous installations.

There is really nothing mysterious about a community awareness programme. A fenced-in industrial plant can look threatening to the public. But much of the mystery disappears when people know what the plant uses and manufactures, that it has a good safety plan and safety record, and that an effective emergency plan exists.

No one can prescribe the activities necessary for a local awareness programme that will fit every industrial facility or complex at every location. However, this Handbook describes actions that plant managers, local authorities and community leaders might take, individually or within the Co-ordinating Group, to improve local awareness. The fourth chapter also provides some basic techniques for information exchange and communication.

THE last chapter outlines the APELL planning process that can be used to achieve a high level of preparedness for emergencies at the local community level. It describes key issues to be addressed in the process and suggests a 10-step approach to plan for emergencies. A checklist useful for completing each step is given, as well as some industry experience.

11 **Annexes** with additional guidance and information are appended.

PREAMBLE

IN late 1986, following various chemical accidents, Dr. Mostafa K. Tolba, UNEP Executive Director, suggested a series of measures to help governments, particularly in developing countries, to reduce the occurrence and harmful effects of technological accidents and emergencies. The first two of these measures were designed to aid governments entering into international conventions.

The third measure was to institute a programme enabling governments, in co-operation with industry, to work with local leaders to identify the potential hazards in their communities and to prepare measures to respond and control emergencies which might threaten public health, safety and the environment.

At UNEP's 14th Governing Council in June 1987, Dr. Tolba was requested to continue these efforts with governments, the United Nations system and world industry and trade, taking into account work already undertaken in this area by other international organizations, and in close co-operation with them.

To develop this programme, and as the outcome of an expert meeting held in Nairobi in June 1987, the UNEP Industry and Environment Office has prepared this Handbook on Awareness and Preparedness for Emergencies at Local Level (APELL). This Handbook provides national governments, local authorities and plant managers guidance on building greater awareness of hazardous installations in a local community, and on preparing well-co-ordinated emergency plans. Since the containment of health and environmental impacts depends upon the speed and scope of the initial local response, the emphasis is thus directed at local level participation. The Handbook recognizes, however, the fundamental roles of national governments, ministries, and the chief executive officers of industries to support and assist these efforts at the local level.

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1. INTRODUCTION

THE BACKGROUND (WHY APELL?)

Recent events raise the issue of safety and emergency preparedness for all peoples in all nations of the world. These events include those which are naturally occurring, such as the earthquake that struck Mexico City in 1985, the mud slides in Ecuador in 1987, or the release of toxic fumes from a lake in the Cameroon. They also include industry-related events that cause serious damage to the environment and unacceptable loss of life and property such as, just to give a few examples:

- The dioxin-containing release in Seveso in 1976
- The propane explosion in Mexico City in 1984
- The release of methylisocyanate at Bhopal in 1984
- The fire and discharge of contaminated waters in the Rhine in 1986 from a warehouse in Basel.

It is now universally acknowledged that every disaster, whatever the cause, has an environmental impact.

Science has not progressed to the stage where all the causes of naturally-occurring events are understood, predicted or effectively prevented. In the meantime, there is a need to prepare ourselves to respond to these emergencies, when and where they occur. Safety experts in industry, on the other hand, have the philosophy that all industrial accidents are preventable. Yet, they are realistic enough also to prepare response plans should such accidents occur.

While most industrial accidents can be contained within the boundaries of the industrial plant, there are those cases where impacts extend beyond its boundaries to affect the plant neighbourhood and have adverse short- or long-term consequences affecting life, life-support systems, property, or the social fabric. The extent of loss caused by such accidents depends to a large extent on the actions of the first responders to an emergency, within the industrial facility and the local community around it.

Clearly, adequate response to such situations calls for well-co-ordinated actions of individuals and institutions from the local community. This can only be achieved if there is awareness in the community of the possible hazards and the need for mutual preparedness to cope with their consequences.

The purpose of this UN Handbook is to increase awareness of all people in the community to hazards that may exist and to help the local community be better prepared for emergencies resulting from industrial accidents that threaten to extend beyond the fence-line of the industrial facility. While this Handbook does not deal with response plans for natural disasters, where such plans already exist they can be a useful base for emergency response to industrial accidents affecting the local community. The intent is to provide linkages between these existing plans and the plans developed for industrial neighbourhoods.

A CO-OPERATIVE PROGRAMME

The APELL Handbook describes a process for local co-operative action to improve community awareness and emergency preparedness. The heart of this process is a Co-ordinating Group of local authorities, community leaders, industry managers, and other interested persons. Although this Handbook is directed at the local level, state or federal governments are fundamental in setting national goals, priorities or regulatory measures, and providing the support and resources that local communities need. High-level management support from industry itself is also essential. The involvement of these higher levels will provide the co-operative climate under which the local participants can achieve better local preparedness, namely the industrial plant, police, fire and health services, military and civil defence units, voluntary services etc.

Several United Nations agencies, other international, regional and national organizations are continuing their efforts to reduce the hazards and risks of industrial development and the consequences of natural or industry-related accidents and disasters. This Handbook takes into account the work already done in this area, but is aimed at a local-level effort based on the personal involvement of individuals who can make the emergency plan dynamic and can implement it with a sense of ownership that keeps it action-oriented and not just a document on a bookshelf.

Some of the main obstacles to the success of APELL may be over-confidence (''a plan has already been prepared''), apathy (''it can't happen here''), or cost concerns (''we cannot afford it''). Frank dialogue between industry and local authorities and community leaders can overcome such attitudes, create the necessary climate for commitment to public safety, and ensure that the community is well-protected by a proven emergency response plan.

SCOPE

Although it is tempting to focus on chemical industries operations, the risks associated with any industrial or commercial operation with potential for fire, explosion, spills or release of hazardous materials require that awareness and response be sufficiently broad and adaptable for whatever danger they may pose. How to determine which industrial and commercial operations should be concerned by the APELL Process is in principle the result of a risk assessment. In most cases however simple judgement and common sense may identify the facilities which may present a potential for a major accident. Also the criteria (lists of substances and threshold levels) set up in international or national regulations or recommendations may provide guidance (see references Annex 11).

This Handbook is not intended to address emergencies related to the nuclear industry or military activities. Nor can the APELL Process be a substitute for regulatory, technical or managerial actions necessary to prevent accidents, or protect the public and workers' health, and the environment in general

FLEXIBILITY

In designing this initiative, UNEP realizes that the various countries differ in culture, value systems, community infrastructure, response capabilities and resources, and in legal and regulatory requirements. Their industries present different potential dangers and risks. UNEP believes all these differing situations have one common need: the ability to cope with an industrial accident affecting the local community.

Due to the many local variations in these countries, the Handbook cannot possibly cover all the needs of the different situations encountered. It can, however, provide the basic concepts for the development of action plans based on local community awareness of potential dangers and the preparation of emergency response plans at the local level.

Finally, this Handbook is neither a unique model for the co-ordination of the efforts of all the participants in the APELL Process, nor is it a detailed manual of the actions and requirements for initiating and implementing the APELL Process successfully. It is more a policy document that sets out the objectives and overall organizational framework for APELL. The objectives remain unchanged yet the mechanics of the operation will change from place to place, and must be adapted to specific local conditions and requirements.

IN SUMMARY

This APELL Handbook consists of this introductory chapter, four substantive chapters, and eleven annexes that provide more detailed information, practical examples, and useful references. Chapter 2 explains the APELL Process and the respective roles of the participants needed for a successful programme. Chapter 3 explains how to form a Co-ordinating Group to get the APELL Process started. Chapter 4 describes community needs for information on hazardous installations and how to reach out to local citizens to improve community awareness. Chapter 5 outlines the steps that a Co-ordinating Group should follow to develop an integrated emergency response plan for its community.

2. THE APELL PROCESS AND PARTNERS

SUMMARY

THIS chapter describes the APELL Process, its basic concepts, main objectives, and its goal of preventing loss of life and property and ensuring environmental safety. The various APELL partners and their roles and responsibilities are identified. As the local community is the first to be called upon to respond to any technological emergency, there are three important partners at the local level: local authorities, industry, and local community interest groups. But at the national level, governments have to be involved to provide the co-operative climate under which the local participants can achieve better local preparedness. Other partners (international organizations, industry associations etc.) have also an important role to play to promote the use of the APELL Process to reduce risks and hazards as well as their consequences.

WHAT IS APELL?

THE "Awareness and Preparedness for Emergencies at Local Level" (APELL) is an initiative sponsored by the Industry and Environment Office (IEO) of the United Nations Environment Programme (UNEP), in co-operation with the United States Chemical Manufacturers Association (CMA) and the Conseil Européen des Fédérations de l'Industrie Chimique (CEFIC). The Community Awareness and Emergency Response (CAER) Program developed by CMA, and experience in its implementation, served as the main background for APELL. APELL also acknowledges specifically the existing responsibilities and roles of the national and international planning communities.

APELL involves two basic aspects:

- To create, and/or increase community awareness of the possible hazards involved in the manufacture, handling and use of hazardous materials, and the steps taken by authorities and industry to protect the community from them.
- To develop, on the basis of this information, and in co-operation with the local communities, emergency response plans involving the entire community, should an emergency endangering its safety arise.

Thus APELL consists of two parts:

- Provision of information to the community, which will be called "Community Awareness".
- Formulation of a plan to protect the public, which will be called "Emergency Response".

APELL is basically addressed to in-plant hazards and the related movements of hazardous materials in the local community. The implementation of the APELL Process may involve people and communities across local, regional or international boundaries. Territorial boundaries or jurisdictions should not restrict the participation of all interested parties in the APELL Process, but instead highlight the need for the APELL Process to develop a co-ordinated emergency response plan.

WHAT ARE THE OBJECTIVES OF APELL?

APELL's overall goals are: prevent loss of life or damage to health and social well-being, avoid property damage, and ensure environmental safety in the local community. Its specific objectives are:

- Provide information to the concerned members of the community on the hazards involved in industrial operations in its neighbourhood, and the measures taken to reduce these risks.
- Review, update, or establish emergency response plans in the local area.
- Increase local industry involvement in community awareness and emergency response planning.
- Integrate industry emergency plans with local emergency response plans into one overall plan for the community to handle all types of emergencies.
- Involve members of the local community in the development, testing and implementation of the overall emergency response plan.

WHO ARE THE APELL PARTNERS?

■ There are Both National and Local Partners:

At the National Level:

National authorities include ministries, departments, agencies, boards, and others responsible for national planning, industry, the environment, public services and safety etc. (see Annex 10). In many countries they have already taken, or are considering taking action in the field of emergency preparedness. Since the initial response to an incident is normally provided locally, and as the nature of such response greatly affects the final outcome and magnitude of an incident, the APELL Process addresses the local level. However the contribution of national governments to the APELL Process in the manner listed in the following section is essential for its success.

At the Local Level:

At the local level, there are three very important partners who must be involved if APELL is to succeed. While others may also be involved, these three partners are the people on the local community level who must participate closely. Obviously, their exact positions or titles will vary from one locality to the other, yet they are basically representatives of the following:

Local Authorities

These may include state, province, district, city or town officials, who are either elected, appointed or nominated to provide the public with the various forms of government or services, e.g. governors, mayors, city councillors, chiefs of police or the fire departments or brigade, the managers of first aid, and social health services, etc. (see Annex 10).

Industry

The principal participants critical to the success of APELL are the owners and/or plant managers of either state- or privately-owned industrial facilities where hazardous materials are used or manufactured. In addition, the involvement and active participation of the work force is important in all circumstances. The transportation industry may also need to be included.

Local Community and Interest Groups

These may include any of the ex-officio leaders of the community, such as religious leaders, leaders of community service groups (chambers of commerce and industry, etc.), environmental groups or associations, health and lay care groups, leaders in the educational and business communities, newspaper editors, members of NGO's*, etc.

■ The Other APELL Partners:

The APELL Process is designed to coordinate with other initiatives and efforts in reducing risks and hazards and the harmful effects of accidents or disasters to the minimum possible. Consequently, several national, international, governmental and non-governmental organizations have an important role, both in disseminating information about APELL, in promoting and supporting its implementation, as well as in integrating it with their activities and programmes. Most important among these are:

- *International Governmental Organizations*
- *International and National Industry Trade Associations*
- *International and National NGO's* (consumers associations, workers associations, etc.).

WHAT ARE THE RESPONSIBILITIES AND ROLES OF THE APELL PARTNERS?

■ Responsibilities and Roles of National Governments

National governments have the overall responsibility of organizing and maintaining an adequate level of preparedness for facing emergencies throughout the country and as such, have a role and responsibilities in the implementation of the APELL Process. These are to:

- Provide guidelines to encourage and support local authorities and industry (in par-

* Non-governmental organization (NGO) — A citizens' organization, independent of government. The United Nations has a list of NGOs that it recognizes as established citizens' groups that work on human rights, community development, and other issues, but the term is used more broadly to refer to any non-profit citizens' group working on social and environmental issues independent of governments.

ticular through industrial associations), to initiate co-ordinated emergency response plans at the local level in all industrial and development areas.
- Disseminate information about the APELL Process and make the Handbook and other relevant publications available on a wide scale.
- Promote and sponsor workshops and training seminars and courses on the APELL Process.
- Provide adequate resources for the local community to respond effectively as soon as an emergency occurs at the local level.
- Follow up and assist in the implementation of the APELL Process (monitoring).

In general, the role of national governments is to establish a climate conducive to the implementation of the APELL Process, confirm the political will and provide the resources for success.

■ Responsibilities and Roles of Industrial Facilities Owners and Managers

Industrial facilities in a specific locality may be:
- owned by the public sector, e.g. nationalized production plants
- direct public service facilities run by government agencies
- privately owned and operated facilities
- joint-venture facilities which combine varying degrees of public and private sector, national and foreign investment or control in their management and operations.

Industrial facilities are usually separated from local common areas by a physical barrier, most often a fence of some sort. Within the fence, one person is usually designated as the leader of activities for the facility. This person is the plant manager. All other personnel of the facility are responsible to the plant manager. In turn, the plant manager is usually responsible to higher authority, e.g., the appropriate ministry if the plant is part of a nationalized production scheme or, if the plant is privately held, the Chief Executive Officer.

The plant manager is normally responsible for safety and accident prevention precautions and specific emergency preparedness measures within the fence. The more insistent the appropriate ministry-/department official or the Company Chief Executive Officer are with respect to these efforts, and the more resources they are willing to assign to the task, the stronger the plant safety and accident prevention are likely to be. In practical terms, the APELL Process relies on their full commitment to ensure that plant managers devise, implement and periodically test accident prevention and emergency preparedness plans inside the fence.

From the point-of-view of a fully-functioning APELL Process, *all* industrial facilities in a given local area must be fully committed to appropriate up-to-date accident prevention and emergency preparedness procedures inside the fence.

Industrial leaders in many areas of the world anticipate the opportunity to interact with local authorities, community leaders and citizens to provide awareness on how the industrial facility operates and how it does and can affect its local area. They also welcome the opportunity to inform the local community on industrial emergency plans.

Consequently, *the responsibilities of the owners of industrial facilities* in the APELL Process may be summarized as:
- to provide the strongest possible support and resources to the plant managers so that the best accident prevention and emergency preparedness procedures are in place in the industrial facility
- to encourage their facility managers to commit themselves fully to the APELL Process
- to monitor the involvement of their facilities in the process.

Apart from his responsibility for safety within the fence of the industrial facility, the facility manager is usually the most appropriate person for interaction with local authorities and community leaders.

Members of the public (emergency responders, health service personnel, the general public) may also turn to the local plant manager for the information they need. The plant manager must be prepared to respond to these inquiries. The information provided should be tailored to the needs of specific groups. For example, emergency responders may want to know not only what chemicals are present, but also in what amounts, so the potential danger in an emergency can be assessed. Health service personnel may need to know specific chemical identity if a trade secret claim has been made for a chemical to which a patient has been exposed.

Therefore, the specific responsibilities of the facility managers within the APELL Process are to:
- Develop outreach programmes in response to public demand for information that will create a well-informed community capable of effective participation in emergency

response programmes without harbouring unfounded fears of hazards.
- Establish close and good working relations with the emergency response agencies in the local community.
- Establish close links with the local community officials and leaders and keep them properly informed about plant safety measures.
- Be the catalyst in the formation of the co-ordinating group.

■ Responsibilities and Roles of Local Authorities

Developing awareness of and preparation for emergencies at local level is a basic duty of local authorities. For several reasons, local governments have a critical role to play in the development of emergency preparedness. First, local governments bear major responsibilities for protecting public and environmental health and safety; local police and fire departments, for example, often have the lead responsibility for the initial response to incidents involving hazardous materials. Second, one of the functions of local government is to mediate and resolve the sometimes competing ideas of different interest groups. Third, local governments have the resources to gather necessary planning data. Finally, local governments generally have the legislative authority to raise funds for equipment and personnel required for emergency response. Local governments should seek the support from the executive and legislative branches which is essential to successful planning: national government leaders must give adequate authority to those responsible for emergency planning.

Local authorities are responsible for safety, public health and environmental protection in their area. In this context, their role in the APELL Process is essentially to:
- Raise public awareness and mobilize public support in the APELL Process.
- Establish a climate for a co-operative programme to develop.
- Co-ordinate emergency and other public group participation.
- Train personnel in emergency response.
- Acquire and mobilize resources needed.
- Ultimately approve the emergency plan developed through the APELL Process, implement and communicate it to the public.

Local authorities can encourage local participation in the APELL Process through meetings and contacts with industry officials and community leaders. They can initiate the APELL Process or they can help generate interest among others for the development of an overall emergency response plan.

This may require participation in town meetings, working with community groups for the Chamber of Commerce, etc. When the initiative for the APELL Process starts, this may be an extra burden on the local authorities who may not have official offices or public funds available for this activity. In these cases, the authorities should seek ways to participate and encourage the continuing of the initiative to serve the public's need.

In some cases, public service functions such as police, fire departments, ambulances, etc. may operate under separate or different authority. Local authorities can be particularly helpful in not only seeking their co-operative participation, but solving any jurisdictional problem that may develop.

Local authorities would also have the role of ensuring that emergency service groups are trained in the handling and management of emergencies, and in implementing the plan as designed by the APELL Process. Special training programmes may be needed.

In plan development, requirements for various equipment, facilities or emergency response personnel may be indicated. In most cases, the local authorities will have these resources available and will need only to co-ordinate their mobilization. In other cases, where the resources are not now available, the local authorities may need to seek ways to obtain the necessary resources.

And finally, the local authorities will have the responsibility for approving the emergency response plan designed by the APELL Process. The authorities will have a major role in implementing the plan and in communicating to the public how the plan will work and what the public should do in case of an emergency.

■ Responsibilities and Roles of Community Leaders

Community leaders represent the concerns or views of their constituents in the community, and have the responsibility to:
- Communicate with local authorities and industry leaders on issues of importance to their constituency in the community.
- Communicate with their constituency on plans and programmes developed to protect public health and the environment.
- Provide leadership through religious establishments, community-based organizations, schools and other programmes to train the public on the details of the plan.

- Help mobilize local support and participation in the APELL Process.

The development of an effective emergency response plan cannot take place without the participation of local community leaders. They serve in many ways to facilitate the development of the plan that fulfills the varied needs of the community. The community leaders' role in the APELL Process assures that the people have a voice in the process along with industry and their local government authorities.

The communication process for APELL to be successful must be two-way. The local community leaders serve to bring to the attention of industry and government the concerns of the community and as "feedback to the community", information on what is being done about their concerns. And, being a "part of the process" helps provide credibility to the effort and the results.

In some countries, community leaders will accept the added responsibility to train the public on the hazards that may exist and the emergency response steps necessary. Instructional programmes through places of worship or via school children back to their families may be the only or most effective way to make the public aware.

Thus the community leader has a special role in building support and enthusiasm for the programme. He or she can be the initiator of the APELL Process, one of the catalysts, or the facilitator or the worker who makes it happen, building confidence and enlisting participation.

The responsibilities of the community leader culminate in his or her own participation in the APELL Process, bringing the knowledge of the community to the process, contributing leadership capabilities, and representing his constituency to the Co-ordinating Group as it works to develop a plan directed at serving community needs.

■ The Role of UNEP

UNEP has prepared a comprehensive programme for the dissemination and implementation of the APELL Process and will support the programme throughout the implementation period. Specific actions will include:

- dissemination of information on APELL
- seeking commitment from industry to participate
- establishing goals for countries' participation and follow up implementation
- promoting regional workshops designed to aid local authorities and leaders in understanding and implementing the APELL Process
- enlisting the participation of other UN agencies and international organizations
- providing assistance to initiate the APELL Process
- providing continuous flow of information and progress reports on APELL implementation.

3.
STARTING THE APELL PROCESS

SUMMARY

THIS chapter explains how to start the APELL Process. Local authorities, community leaders and industrial representatives should begin by building a co-operative bridge for a unified and co-ordinated approach to emergency response planning and communication within the community. Establishment of a Co-ordinating Group will provide this bridge. The tasks of this Group will be to gather facts and opinions, assess risks, evaluate approaches and generally organize the personnel and the resources available in the community to produce an emergency response plan. Any person can be the catalyst to initiate the APELL Process and to establish the Co-ordinating Group. Once this Co-ordinating Group has been organized, a "leader" should be selected, whose primary responsibility will be to conduct the Group's efforts through the various phases of the work described in chapters 4 and 5.

HOW WILL APELL WORK?*

ALL industrial facilities have a responsibility to establish and implement a "facility emergency response plan". A key foundation for such a plan is a safety review of facility operations. This safety review, which is central to a company safety plan, examines in detail those items that affect safe operation of the facility. A list of such items is given in Annex 1. One part of this in-depth review by the facility management is the preparation of an emergency response plan. Typical components of such a plan are listed in Annex 2. It is worth noting that several components of the emergency response plan involve notification and communication, with both authorities and citizens of the local area surrounding the industrial facility.

In addition to the existence of facility emergency plans, there may also be national government emergency plans or programmes in place. The APELL Process is designed to build, using all emergency plans that may already exist as a basis, a co-ordinated single plan that will operate effectively at the local level where first response efforts are so critical. While national organizations and plans exist for emergency response, there is always the need for an effective support structure at the local level.

In order for local authorities and local leaders to play their most effective roles with respect to awareness and preparedness for emergencies, there must be close and direct interaction with representatives of those industrial facilities to which the local area plays host. *Indeed, local authorities and leaders and industrial representatives need to find the means to build a bridge between local government responsibilities and industry responsibilities.*

The APELL Process recognizes this need for a bridge. Figure 1 contains a diagram showing schematically how industry representatives and local authorities/leaders can interact to form a partnership which will provide the needed bridge, or "Co-ordinating Group" to ensure close and direct interaction between industry and the local community. Figure 2 indicates how the bridge can operate in implementation of the APELL Process.

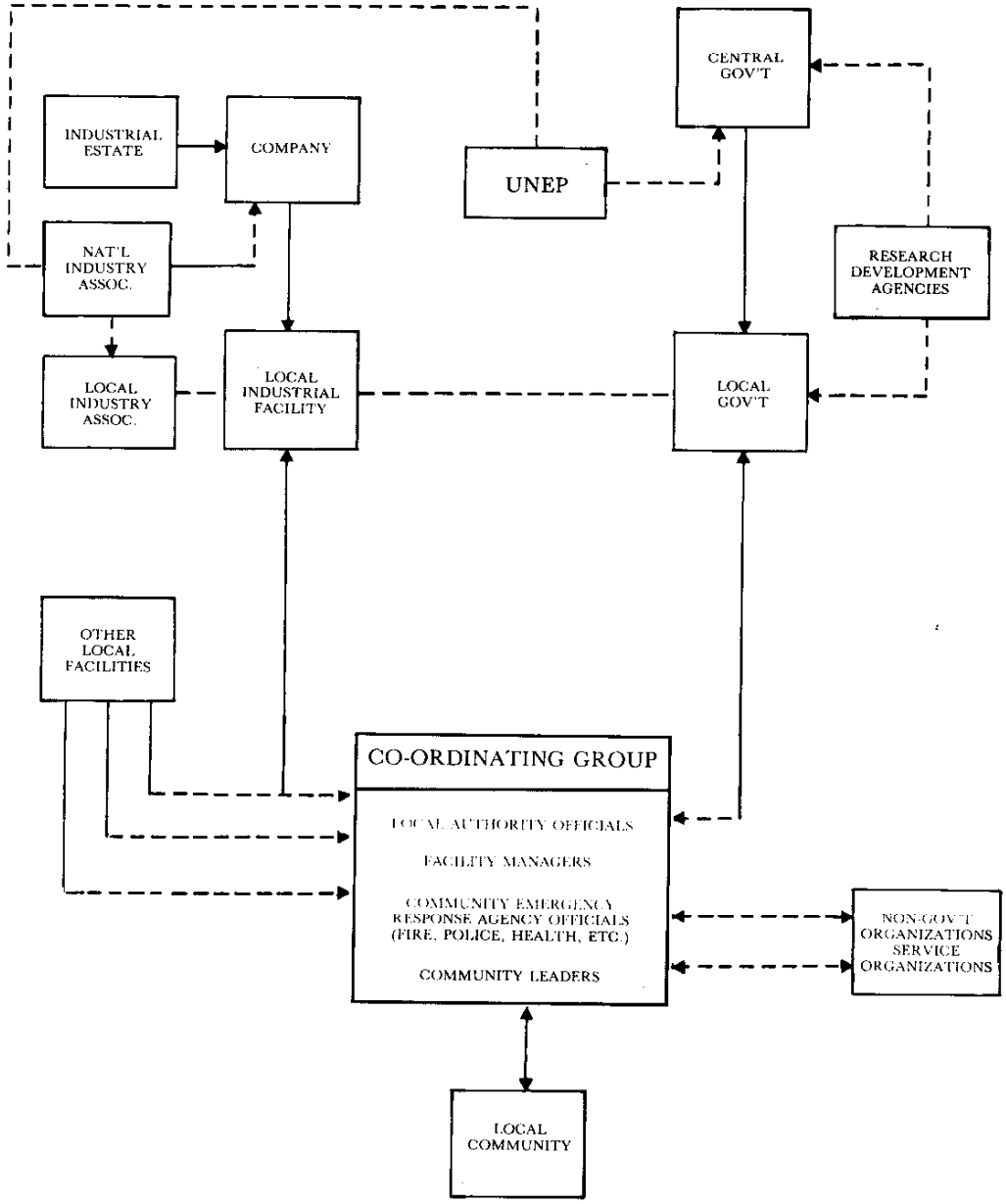
The Co-ordinating Group is clearly the mainspring of the APELL Process. Members of the Co-ordinating Group must be able to command the respect of their various constituencies, e.g. industry, local group, etc., and be willing to act co-operatively in the interest of local well-being, safety and property. The Leader(s) of the Co-ordinating Group ideally should be able to ensure motivation and co-operation of all segments of local society regardless of cultural, educational, economic and other dissimilarities among these segments. This attribute of the Leader(s) of the Co-ordinating Group needs to be kept firmly in mind when selecting individuals to act in the role of Leader(s).

In sum, the Co-ordinating Group's role arises since industry is primarily responsible for protective actions "inside the fence" while local government is responsible for the safety of the general public. *The role of the Co-ordinating Group is to provide the bridge between industry and local government with the co-operation of community leaders* (see Figure 2) *and develop a unified and co-ordinated approach to emergency response planning and communication with the community.* It should be clear that the Co-ordinating Group has not itself a direct operational role during an emergency, but is preparing the various parties involved to be ready and know their tasks should an accident occur.

* *Chapter 4 gives more details about implementation.*

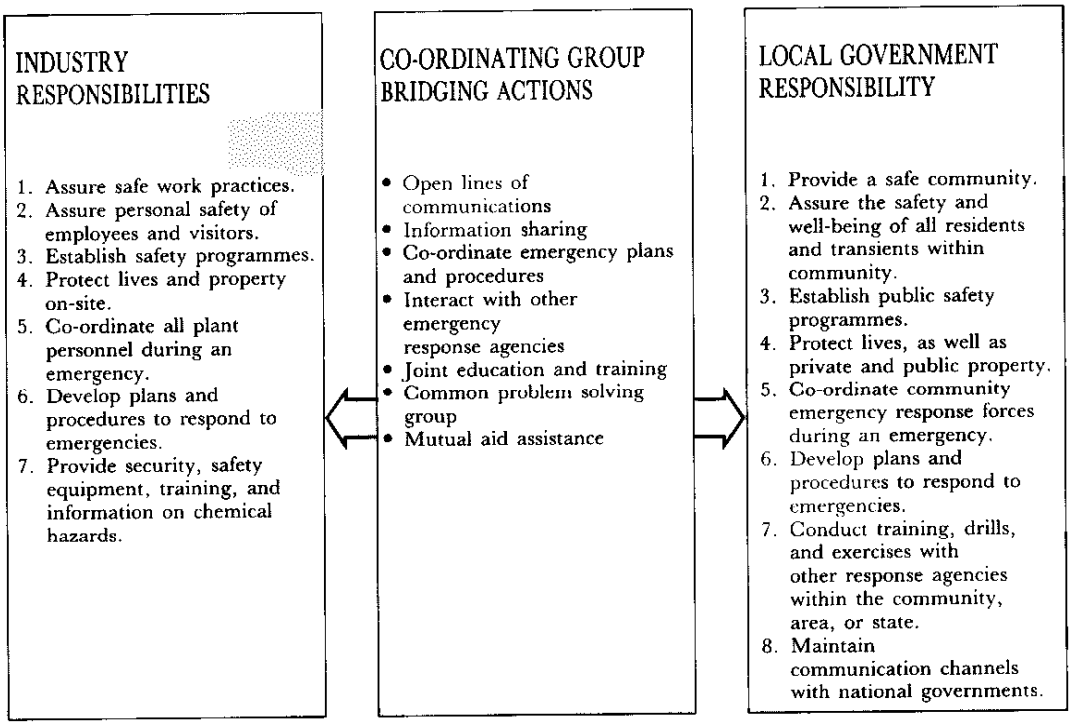
APELL INFORMATION AND ORGANIZATION FLOW CHART

FIGURE 1.



RESPONSIBILITY BRIDGE

FIGURE 2.



HOW TO FORM THE CO-ORDINATING GROUP?

THE key organizational step to make the APELL Process work is the formation of a Co-ordinating Group representing the various constituencies that have or should have a voice in the establishment of an emergency response plan. The Group should include members from local authorities, local community leaders and industry. The Co-ordinating Group becomes the critical management team to develop the APELL Process at the local level.

It is important to bear in mind that all affected parties have a legitimate interest in the choices among planning alternatives. *Strong efforts should therefore be made to ensure that all groups with an interest in the planning process are included.* Annex 3 contains a list of people or organizations who should participate if the Co-ordinating Group is to function effectively.

The APELL Process may be initiated by any member of the three involved groups: local authorities, local community leaders, or industry managers. As presented in chapter 2, pages 15-18, each has different responsibilities and roles in the Co-ordinating Group.

In particular, plant managers of industrial facilities in the local area need to be active participants in the Co-ordinating Group. In turn, local authorities and community leaders need to know that these plant managers are acting with the blessing and authority of the highest officers of their respective organizations, in order to ensure the success of the APELL Process.

Certain factors are of key importance in forming the Co-ordinating Group:

- The members must have the ability, commitment, authority and resources to perform their tasks.

- The members must have, or be able to obtain quickly a wide range of expertise relating to the local area, its industrial facilities and transportation systems, and the mechanics of responding to emergencies.
- The members must set and agree upon objectives of a specific programme for awareness and preparation for emergencies in the local area which they represent.
- The members must work co-operatively with one another to achieve these goals and objectives.
- The members must agree to continue to work together after the plan has been formulated in order to ensure that there is no loss of local preparedness in response to changes in the local area, e.g. installation of new hazardous facilities.

Once the members of the Co-ordinating Group have been identified and have agreed to serve, a Leader needs to be selected and procedures for developing and managing the process of planning for awareness and preparation for emergencies at local level must be established. Five factors are crucial in selecting a person to whom leadership of the Co-ordinating Group can be entrusted:

- The degree of respect held for the person by other members of the Co-ordinating Group.
- Availability of the person's time and resources.
- The person's experience in managing group work relationships.
- The person's management and communication skills.
- The person's existing responsibilities, if any, related to emergency planning, prevention, and response.

The leadership of the Co-ordinating Group has the primary responsibility to oversee the Group's efforts throughout the entire APELL Process. Given the role of industry as embodied by plant managers of industrial facilities in the area and the local citizenry as embodied by local authorities/leaders, the Co-ordinating Group may find that a co-leadership of one plant manager and one local authority member is a useful way to proceed. Both personal and institutional considerations should be weighed in selecting a team leader. For example, a particular organization may appear to have all the right resources for addressing hazardous materials incidents. But if the person in charge of that organization does not interact well with other local officials, it might be best to look for a different leader.

The leadership of the Co-ordinating Group needs to work with Group members to establish clear objectives and deadlines for various phases of the work. Progress toward these objectives and deadlines should be monitored frequently (see page 41 and Annex 9).

The establishment of monitoring and approval of planning assignments are the central responsibilities of the Co-ordinating Group. In order to have on-going co-operation in implementing the plan, it is recommended that the Co-ordinating Group operate on a consensus basis, reaching general agreement by all members of the team. Achieving consensus takes more time than majority voting, but ensures that all represented parties have an opportunity to express their views and that the decisions represent and balance competing interests. If it is determined that a consensus method is inappropriate or impossible (e.g., because of the multi-jurisdictional nature of a Group), the Co-ordinating Group should formally decide how issues will be resolved. The Group approach requires also the merging of inputs from different individuals, each with a different style and priorities. The Co-ordinating Group leadership must ensure that the final plan is consistent in substance and tone.

Because planning efforts work best when people understand the ground rules, and know when and how they will be able to participate, the procedures to be used for monitoring and approving assignments should be carefully thought out at the beginning of the APELL Process. These monitoring and approval procedures can be adjusted at any time to accommodate variations in local interests and concerns.

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4.
BUILDING COMMUNITY AWARENESS

SUMMARY

THIS chapter describes the needs and rights of the local community to be informed about hazardous installations. It then lists actions that plant managers, local authorities and community leaders can take, individually or within the Co-ordinating Group, to improve local awareness of the concerned industrial activities, and provides some techniques for information exchange and communication.

THE NEED FOR AND THE RIGHT OF THE LOCAL COMMUNITY TO KNOW ABOUT HAZARDOUS INSTALLATIONS

CITIZENS in local communities have expressed concern that potentially hazardous materials which could affect their health and environmental safety may be produced or used in their community. These citizens want to know if these materials are present; their concern is often termed the "Right-to-Know".

In addition they need to be informed about potential hazards of hazardous installations in order to understand why an emergency plan has been established, how it works and what actions they are expected to take in case of an emergency.

Such principles are embodied in many regulations or recommendations such as the *Guidelines for World Industry set forth by the International Chamber of Commerce,* which in particular, state that:

- Industry has its particular environmental responsibilities in terms of such factors as plant location and design, process selection and product design, environmental pollution, harmful radiation, vibration and noise controls, waste disposal, occupational health and safety aspects and long-range planning.
- The wide range and complexity of problems raised by environmental protection measures calls for close and meaningful contact and consultation between industry and government — locally, nationally and internationally — in the search for the most appropriate solutions. This consultation should include review of the legislative and regulatory frameworks, and their content, for achieving this goal.
- Industry has a responsibility to provide public authorities with available relevant information about emissions, effluents, wastes and other environmental nuisances, including potential adverse health and environmental impacts.
- When siting and designing its installations, industry should be prepared to provide information on steps it is taking to protect the local environment and meet safety requirements. In any public debate on issues such as siting, industry should be given an adequate opportunity to state its case. The aim must be to reach solutions mutually acceptable to industry, the relevant authorities and the community.
- Industry and public authorities should jointly work out contingency plans to deal with pollution emergencies and accidents. In this regard, industry should inform the relevant authorities about the known and significant hazards of its operations, so as to enable them to act quickly and properly.
- Industry should provide input to balanced and informed public discussion of environmental problems and should support efforts to place in proper perspective the comparative significance of industrial and non-industrial sources of pollution.
- When developing and implementing environmental protection programmes, industry should take into account the opinions of the general public, scientific bodies, and other concerned organizations and, where appropriate, take the lead in raising the level of awareness and understanding of these programmes.

Industry supports the International Chamber of Commerce guidelines. *Industry leaders agree that for facilities which produce, utilize, store and transport potentially hazardous materials, plant managers have a responsibility to provide information on these materials which responds to the needs and requests of emergency responders, health personnel and the general public.* Industry may have special commercial information such as process information or formula compositions, which may be a trade secret and which must be respected and protected. But this protection should not prevent the disclosure of information relevant to public health and safety.

For many potentially hazardous substances, there exist various sources of information, such as companies' Material Safety Data Sheets (MSDS), Environmental and Health Criteria Documents or Safety Guides of the International Programme on Chemical Safety (IPCS) or Data Profiles of the UNEP International Register of Potentially Toxic Chemicals (IRPTC). These describe the substance, its hazards and how to deal with these hazards in case of need. They are practical and consistent means for Co-ordinating Groups throughout the world to obtain data concerning specific potentially hazardous materials in their local areas. For substances not covered by such sources, industry can usually supply equivalent information if necessary.

Annex 11 lists some such sources of further information.

WHAT AND HOW TO COMMUNICATE TO BUILD COMMUNITY AWARENESS

DEALING with the local community is the very real form of environmental stewardship. The community in which a facility is operated is as much a part of the environment as the air and the water around the plant. Community relations is an important management function that can contribute greatly to both short- and long-term success of the operation. Establishment of good relationships with key members of the community is vital in preparing for possible emergencies, but its value goes far beyond that. Good community relations can also be invaluable in maintaining the public's support for the plant and industry at large, building confidence in their community leaders and authorities.

A fenced-in industrial plant can look mysterious and threatening to a community, but if it becomes familiar with the people who run the plant, gets to know them as normal, caring human beings, much of the community's fears are relieved. It is easier to accept someone in an open relationship working side by side on a regular basis resolving local issues. Much of the mystery disappears when people know what the plant uses and manufactures, and that it has a good safety plan and safety record.

No one can prescribe the activities necessary for a local awareness programme that will fit every plant at every location. What is practical and effective will depend upon the local situation. The following list of ideas and suggestions may apply to any situation. Some of the ideas have been used by industry managers, local authorities, or community leaders for a long time, others are new. It is important, however, that every industrial facility, local authority or community leader give consideration to the community and maintain the relationships that provide two-way communication

Industry managers, local authorities or community leaders who participate whole-heartedly in establishing and implementing the APELL Process should consider the following points in building community awareness:

■ ***Define the local community concerned***
- Geographic or administrative boundaries
- Governing bodies affecting the operations
- Influential organizations such as civic, religious, educational, etc.
- Major media (newspapers, radio/television stations, local speakers, town meetings, etc.)
- Concerns of local residents

■ ***Inventory existing local community contacts***
- Clubs and associations (Chamber of Commerce, local clubs, etc.)
- Elected officials
- Prominent civic leaders
- Local fire officials
- School administration
- Industry contacts

■ ***Contact other industrial facilities to co-ordinate community affairs activities***
- Establish preliminary contact with other plant managers
- Consult state, regional or local associations
- Form a local coalition for external outreach
- Assign responsibilities among participants
- Have each industry representative handle a portion of the outreach efforts in the APELL Process
- Form a network with other plant managers.

■ ***Plan an initial meeting of the APELL Process Co-ordinating Group***
- Consider including a representative from the local news media management in the Co-ordinating Group

- Assign responsibilities among industry representatives for contacting local authorities/leaders as potential participants
- Plan for a meeting; prepare and distribute a draft agenda
- Assign an industry co-chair responsibility for the initial meeting.

■ ***Develop fact sheets or kits on each industrial operation***

- Size of facility (employees/square meters, etc.)
- Products (keyed to consumer end-uses and exports)
- General description of operations (including risks and steps taken to minimize them)
- Safety record
- Environmental protection programmes and clean-up efforts
- Hazard information (converted into layman's terms)
- In-site emergency plan
- Information on worker safety training programmes
- Specific contributions to the local community
- Funds spent locally on supplies, materials and services
- Funds granted to public services (e.g. housing, health services, schools, etc.)
- Photos/film clips of plant geared to local population's understanding
- Organize the fact sheet and other resources into a media/visitor file.

■ ***Develop fact sheets on community preparedness***

- Population within defined community boundary
- Special population groups (schools, nursing homes, etc.)
- Community emergency response capabilities
- Community emergency response plans
- Emergency response equipment available
- Health facilities.

■ ***Assign responsibility for communications tasks***

- Consider outside assistance
- Select someone generally available to and known by the public, including during emergencies, as spokesperson
- Consider and develop communications skills
- Involve locally prominent/active employees.

■ ***Look for communications opportunities***

- Identify and seek appropriate audiences within the local area
- Participate in all Co-ordinating Group communications efforts.

■ ***Select methods of communications appropriate for local circumstances, such as:***

- Fact sheets or brochures
- Slide/speech presentations
- Small group meetings (elected officials, local regulators, etc.)
- Direct mail (correspondence with local authorities and leaders)
- Business association's publicity efforts on industry activities in the area, region and beyond
- Community newsletters and oral communications
- Employee/retiree publications and speeches
- News releases
- Plant tours
- Community open houses
- Advertising
- Educational activities (visiting schools, providing seasonal employment for teachers, etc.)

■ ***Get outside help***

Various organizations can provide services that will ease the burden on personnel or authorities.

- Organizations that can help:
  - the company's public affairs or community affairs department
  - the local or national industry association
  - other similar local industrial plants
  - other local industries and businesses (Chamber of Commerce, etc.)
  - public relations consulting firms
  - community and religious leaders
- Services these organizations can provide:
  - developing a fact sheet about the facility operations
  - developing a community relations plan
  - providing communications support (speechwriting, news releases, etc.)
  - converting technical hazard information into general communications for external audiences
  - developing a communications/media kit on the facility's integrated emergency response plan
  - management training for authorities/leaders in meeting the public and the media
  - preparations for staging open houses and tours.

■ ***Industry managers have also special communications responsibilities toward their employees***

- Explain to each employee about the APELL Process and the plant's role in it

- Emphasize the importance management places on attaining and maintaining local awareness and emergency preparedness
- Re-enforce the importance of the APELL Process with articles in the plant newsletter, on bulletin boards, with in-house awards, etc.

■ ***Similarly, local authorities should also explain the APELL Process to their personnel, and the roles of local emergency services, etc.***

THE DO'S AND DON'TS OF INFORMATION COMMUNICATION

ALL parties in the APELL Process have a duty to keep the public informed on progress. All parties should ensure the public does not receive conflicting or confusing messages; confusing or contradictory information can undermine the entire co-operative effort. Therefore, all communication on the APELL Process must be carried out in a spirit of co-operation and trust between industry, local authorities/leaders and the local media. In certain areas of the world, the media is radio, television, newspapers and specialist reporting. In other areas, the media may take the form of verbal reports to people in a neighbourhood, loudspeaker trucks, or even messages from teachers to school pupils who in turn can make their parents aware of the contents of the message.

It is important to prepare APELL Process information for dissemination at *all* levels of the educational system from grade schools to university. Teachers should be viewed as a key resource in the APELL Process.

It may also be important to prepare APELL Process information for dissemination through religious leaders and through their places of worship.

Developing good working relationships with media has a positive impact on implementing the APELL Process. It is not a magical process but rather one that requires time and effort by facility managers, local authorities, community leaders and of the Co-ordinating Group as a whole. Selection of a spokesperson is very important for all participants in the APELL Process. Such a spokesperson must understand each component in the APELL Process and the needs of various media, and must be articulate and able to put complex material into more understandable terms. Above all, the spokesperson must have the confidence of each participant of the Co-ordinating Group, so that he or she can speak for the Co-ordinating Group without the need to confirm every word.

Good media relationships pay the same dividends that well-nurtured community relations can bring. If Co-ordinating Group members have established themselves as open and responsive, and have tried to bring "good news" to the media, they will stand a much better chance of receiving good treatment if and when things go wrong. If members of the media know who members of the Co-ordinating Group are, and how to reach them or their spokesperson, and have received credible, useful information in the past, each party involved in an incident will likely get its side of an emergency story to the public by means of the media.

Media relations efforts, like local area co-operation programmes, cannot be started after trouble has arisen. When there is a spill, or someone gets hurt, it is much too late to begin developing close relationships with local media people. They have a job to do and will not wait while you explain that "excellent programmes are in place".

Within the framework of the APELL Process, considerations for media relations should include:

■ ***Preparation***

- Decide who will serve locally as spokesperson for each participant of the Co-ordinating Group. This person should serve in the same role in all contacts with the press so as to be a familiar voice in an emergency situation.
- Determine what media really count in your community. Take an inventory.
- Find out (if possible) which reporters are most likely to be interested in stories that might involve your activities, e.g. industrial facility, APELL Process in general, etc.
- Assemble the basic facts about your activities in a language that "outsiders" can understand. Include photos and, where useful, video cuts or films.

■ ***Getting acquainted***

- If practical, get to know the local and regional editors or reporters who may be assigned to cover your activities.
- Read the local papers and watch other local media coverage to understand what they tend to emphasize. Do they like "people" stories or events?

- It is especially important to involve local leaders in the "getting acquainted" process. School officials, teachers, religious, and neighbourhood leaders, etc. should be brought into the APELL Process. Industry managers should make special efforts to reach out to these leaders.

■***Cultivating and maintaining good relations***

- See that the local media is getting material relevant to area industrial operations (developments, personnel changes, etc.)
- Develop personal relationships with key media people, (editors, publishers, etc.) through civic and other activities
- Seek opportunities to bring media people to areas for "good news". Tours are good where appropriate. Use press conferences for important announcements.

■***Development of a plan before trouble comes***

- Plan to use the same media spokesperson who has built relationships with the press. Don't change when an emergency arises!
- Equip your spokesperson with basic information concerning area industrial operations which involve hazardous materials in a form that can be handed out. This should include available Material Safety Data Sheets (MSDS) when appropriate
- Plan for your spokesperson to receive current and accurate information about the emergency as it progresses
- Select a location to serve as a press centre in case of major emergency. Consider safety, access to telephones, and other services. The location selected should be away from local emergency operations headquarters
- Industry managers should decide, in advance, a general policy on press (and camera) access to their facility in an emergency situation.

■***Follow up the plan when trouble comes***

- The spokesperson should be included in the first call out of emergency personnel and should be fully briefed on the situation.
- Log all inquiries as they come in and make notes on the questions and your answers.
- Be sure to get the name and the affiliation of media callers so that follow-up calls can be made.
- Understand and be prepared for the fact that local media may get word of a problem as soon as you do. They may be calling for information within minutes of the start of the emergency
- Be as open and forthcoming as possible with the press and try to co-operate with their deadline constraints.

■***Some useful generalities***

- Determine the time for public announcement of the APELL Process
- Encourage community planning group to initiate contacts with media
- Be responsive to unsolicited media interest
- Invite media coverage of drills
- Involve media representative on the planning committee
- Check into using public announcements (radio and television)
- Place articles in existing community newsletters
- Discuss the possibility of advertising the integrated plan
- Involve appropriate public participants in the planning processes (e.g. fence-line neighbours).

■***Furthermore, take into consideration the following:***

- Do not expect reporters to be trained in the intricacies of industrial processes. Keep all explanations factual, and in simplified, non-technical terms. Analogies are useful
- Never speculate even when asked by a reporter what might have occurred in an incident. Don't try to answer any kind of hypothetical question
- Don't be afraid to tell a reporter "we don't know" in answer to his questions — there may not be an answer. If an answer can be provided later, be sure to get back to the reporter
- Situations involving dead or injured personnel are especially sensitive. It is very important that names not be released before relatives are definitely notified. Media people are accustomed to this policy and will almost always respect it
- In the case of injuries don't try to comment on the degrees of seriousness. Leave that to the medical people
- Reporters do not really expect you to tell them everything that is known, but they sometimes will push, hoping for further details. Be open and co-operative, but it is not necessary to go beyond factual outlines of the situation
- Above all, treat reporters with courtesy and respect. There will be times when it is difficult but there is nothing to be gained by appearing "hard". They are simply doing their job, just as you are doing yours.

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5. ACHIEVING PREPAREDNESS FOR EMERGENCIES

SUMMARY

AS outlined in earlier chapters of this Handbook, the APELL Process is designed to improve the emergency response preparedness of local communities. It is based on the concept that a well-informed local community can develop an effective response plan co-ordinating local industry, authorities, and other interested groups on a local, regional or national level.

As outlined in chapter 3 of this Handbook, APELL relies on the formation of a Co-ordinating Group to start the process. This chapter provides the Co-ordinating Group's step-wise approach to fulfilling the APELL Process, which is intended to be flexible to allow accommodation of different situations encountered in various countries. As such, this chapter outlines the steps or objectives to be achieved rather than specific procedures to be followed. The annexes offer various material on procedures that can be used and/or references which may be helpful.

ISSUES TO BE ADDRESSED IN EMERGENCY PREPAREDNESS PLANNING

AS outlined in chapter 3, the starting point for the APELL Process is the formation of a Co-ordinating Group and the development of its organized structure.

The Co-ordinating Group should include representatives of the various parties that can address all significant issues in emergency preparedness for the particular community. These issues may vary widely from community to community depending on the nature of the hazard, the local response resources available, governmental requirements, training needs, etc.

Among the first steps in the planning process are the gathering of information and assessment of the current situation. Therefore one of the first tasks facing the Co-ordinating Group is the collection of basic data. This can be done through personal contacts by Co-ordinating Group members or by surveys sent to local industry and government offices, to:

■ ***Identify local agencies making up the community's potential local awareness and response preparedness network***

- Fire department
- Police/militia
- Emergency health service associated with local hospitals or fire and police departments
- Emergency management or civil defence agency
- Public health agency
- Environmental agency
- Public works and/or transportation departments
- Red Cross/Crescent
- Other local community resources such as public housing, schools, public utilities, communications, religious organizations, non-governmental organizations (NGO's).

■ ***Identify the hazards that may produce an emergency situation***

While one tends to think of chemical manufacturing facilities, other operations should also be reviewed for potential major hazards. These may include:

- Major industrial facilities (refineries, steel mills, paper mills, etc.)
- Small processing facilities which may store or use hazardous materials
- Hospitals
- Transportation and warehousing facilities.

Thus planning for emergency preparedness at the community level should consider all hazards that may be of significant consequence to the community. For example, chlorine stored and used at the local drinking water processing plant would produce an emergency if chlorine leakage occurred.

Other hazards, such as earthquakes, typhoons, etc., may also be relevant to the community. Emergency planning to respond to naturally occurring events should be co-ordinated with the planning for emergencies from man-made operations.

■ ***Establish the current status of community planning and co-ordination for hazardous materials emergency preparedness and assuring that potential overlaps in planning are avoided***

- Is there a community planning and co-ordination body (e.g., task force, advisory board, interagency committee)? If so, what

is the defined structure and authority of the body?
- Has the community performed any assessments of existing prevention and response capabilities within its own emergency response network?
- Does the community maintain an up-to-date technical reference library of response procedures for hazardous materials? (see Annex 11)
- Have there been any training seminars, simulations, or mock incidents performed by the community in conjunction with local industry or other organizations? If so, how frequently are they conducted? When was this last done? Do they typically have simulated casualties?

■ ***Identify the specific community points of contact and their responsibilities in an emergency***
- List the agencies involved, the area of responsibility (e.g. emergency response, evacuation, emergency shelter, medical/health care, food distribution, control access to accident site, public/media liaison, liaison with regional responders, locating and manning the command centre and/or emergency operating centre), the name of the contact, position, 24-hour telephone number, and the chain of command (Annex 7 contains suggestions for establishing an emergency operating centre).
- Is there any specific chemical or toxicological expertise available in the community, either in industry, colleges and universities, poison control centres, or on a consultant basis?

■ ***List the kinds of equipment and materials which are available at the local level to respond to emergencies***

How can the equipment, material and personnel be made available to trained users at the scene of an incident?

■ ***Identify organizational structure for handling emergencies***

There may already be in place emergency response plans prepared by local industry for their plant, or the regional government may have a regional response plan prepared. The Co-ordinating Group should determine what plans already exist, if any, and assure that these plans are co-ordinated to facilitate effectiveness and avoid gaps in the organized response to any emergency.

The chain-of-command is particularly important once an emergency develops. There can only be one person in charge. Any disputes or disagreements on this should be resolved in the planning process before an emergency occurs.

■ ***Check if the community has specialized emergency response teams to respond to hazardous materials releases***
- Have the local emergency services (fire, police, health) had any hazardous materials training, and if so, do they have and use any specialized equipment?
- Are local hospitals able to decontaminate and treat numerous exposure victims quickly and effectively?
- Are there specialized industry response teams, governmental response teams, or other response teams available within or close to the community? What is the average time for them to arrive on the scene?
- Has the community sought any resources from industry to help respond to emergencies? In many local areas, core elements (fire brigade, organized medical response team, indeed any organized group able to respond to emergencies) do not exist; in such cases, industry may need to supply the resources to ensure that emergency response is effective.

■ ***Define the community emergency transportation network***
- Does the community have specific evacuation routes designated? What are these evacuation routes? Is the general public aware of these routes?
- Are there specific access routes designated for emergency response and services personnel to reach facilities or incident sites? (In a real incident, wind direction might make certain routes unsafe).

■ ***Establish the community procedures for protecting citizens during emergencies*** (e.g., asking them to remain indoors, close windows, respond to sirens in a specific fashion, etc.).

■ ***Set up a mechanism that enables responders to exchange information or ideas during an emergency with other entities,*** either internal or external to the existing organization structure

Once these questions have been examined, local authorities should have some qualitative view as to the local area's basic ability to deal with a hazardous installations emergency. But no further resources should be expended until a hazard analysis is performed for the local

area. "Hazard" in this context means any situation which has the potential for causing injury to life and health, or damage to property and/or the environment.

The above issues cover only some of the major considerations or issues that should be resolved within or by the Co-ordinating Group in using the APELL Process. *Further details are covered in the Annexes to this Handbook.* These Annexes may be helpful to the Co-ordinating Group in selecting the issues that are critical to their particular situation as they apply to the APELL Process. Please refer to:

- Annex 1: Elements of a safety review for an industrial facility.
- Annex 2: Typical components of an industrial facility emergency response plan.
- Annex 3: Criteria for assessing local preparedness.
- Annex 4: Emergency response planning elements.
- Annex 5: Checklist for evaluation of emergency response plan.
- Annex 6: Emergency response plan evaluation matrix.
- Annex 7: Big city crisis management.
- Annex 8: Example outline for emergency plan test drill scenario.

A TEN-STEP APPROACH TO THE APELL PROCESS FOR PLANNING FOR EMERGENCY PREPAREDNESS

BASED on experience a ten-step approach to implement the APELL Process can be set forth which leads to a useful and effective integrated community emergency response plan. Significant effort will be required to complete each step. Listed below are the ten steps which are also presented in a flow chart (see Figure 3).

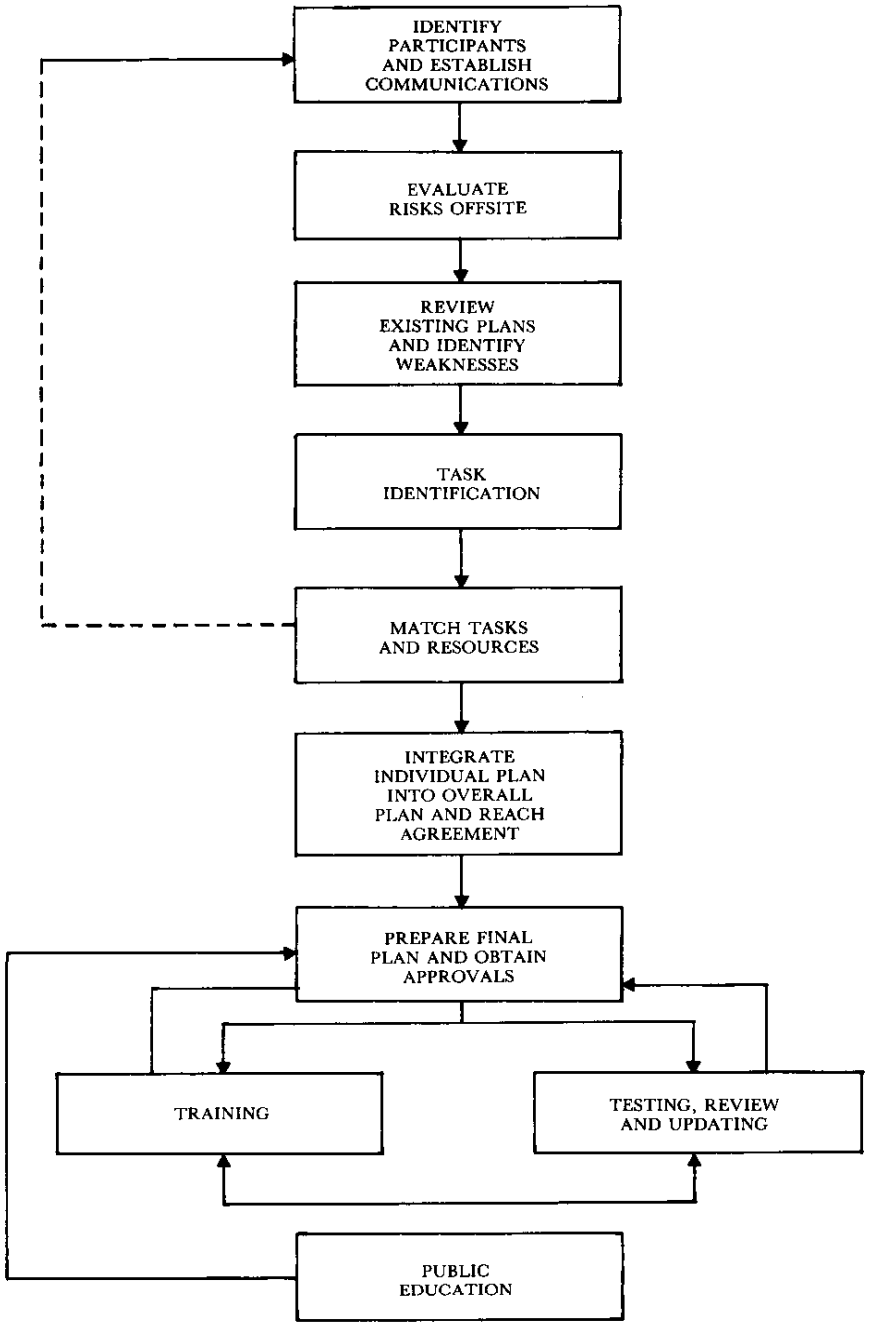
- Identify the emergency response participants and establish their roles, resources and concerns.
- Evaluate the risks and hazards that may result in emergency situations in the community.
- Have participants review their own emergency plan for adequacy relative to a co-ordinated response.
- Identify the required response tasks not covered by existing plans.
- Match these tasks to the resources available from the identified participants.
- Make the changes necessary to improve existing plans, integrate them into an overall community plan and gain agreement.
- Commit the integrated community plan to writing and obtain approvals from local governments.
- Educate participating groups about the integrated plan and ensure that all emergency responders are trained.
- Establish procedures for periodic testing, review and updating of the plan.*
- Educate the general community about the integrated plan.

Each of the ten steps is elaborated on the following pages of this chapter. Each of the ten steps is described in a 3-section format. Section 1 describes the step. Section 2 provides a checklist useful for completing the step. Section 3 presents the results of some experience in completing this step. Where appropriate, reference is made to other tools available in this Handbook to assist in completing this step.

* See Annex 6 for a sample of the issues to address when evaluating and updating the plan. It will also be useful for regular reporting.

COMMUNITY EMERGENCY PLAN IMPLEMENTATION FLOW CHART

FIGURE 3.



STEP 1

Identify emergency response participants and establish their roles, resources and concerns.

There is a wide range of potential participants in emergency response.
It is important to identify them early so that their resources can be factored into the planning and their concerns can be addressed. Some may have existing emergency plans which should be obtained.

Follow these suggested actions to complete Step 1:

- Using the knowledge of the Co-ordinating Group, compile a list of potential participants in emergency response activities.
Annex 10 identifies possible participants.
- Obtain copies of existing emergency plans (See Annex 4 for elements of a typical plan) and review these for additional participants.
- Prepare a brief written description of all participants, their expected roles and the resources they have available (personnel, equipment, facilities, special knowledge, etc.).
- Go on to Step 2.

Case studies

Co-ordinating Groups comprised of a broad base of officials will be in the best position to understand the resources available in the local area. Some communities may have to reach beyond the usual emergency responders, using volunteer groups where large numbers of responders are needed (e.g., co-ordinating evacuation).

Industry mutual aid agreements may also expand the base of participants where utility personnel* can assist in hazardous materials response and plant personnel assist in a utility failure.

* *Fire Brigade, Police, etc.*

STEP 2

Evaluate the risks and hazards which may result in emergency situations in the community.

Possible events should be identified and their probability of occurrence and consequences must be addressed to set priorities for planning.

Follow these suggested actions to complete Step 2:

- Using the concerns of the Co-ordinating Group, compile a list of potential hazards which may result in emergency situations in the community. Consider the following:
  - chemical plants
  - nuclear facilities
  - natural disasters
  - industrial facilities
  - transportation activities
- Define the magnitude of the risk and the potential severity of the impact by evaluating:
  - size of potential zone of impact
  - number of people at risk
  - type of risk (toxic, chronic, injury)
  - long-term impacts
  - impacts on sensitive environmental areas.
- For determining probability of occurrence, decide if a qualitative approach is sufficient or whether a quantitative risk assessment is useful.
Factors to consider include:
  - probability of individual events
  - probability of simultaneous events (e.g., natural disaster resulting in release of hazardous materials)
  - complications from unique environmental considerations such as severe terrain, location in flood plain, or valley wind conditions.
- Prepare a list of scenarios that could reasonably be expected to occur. Refer to these throughout the planning process.
- Go on to Step 3.

Case studies

One community used a questionnaire, developed by industry and sent out by the fire department, to establish contact with local industries, develop preplanning information,

and assess the nature and location of fixed facility risks.

Transportation departments, railroads, airport authorities and local police and fire departments can help establish the nature, quantity and mode for transported materials.

In one city, this type of study identified one specific highway interchange that had a high frequency of tank truck rollovers and improved warnings are planned.

In one county, risk evaluation led to the development of specific product references, training and the formation of a chemical hazards information team from a broad base within the community.

One community spent little time on evaluating risk, deciding to focus its energies on better organization for response on the assumption that there was a wide range of hazardous materials present in the area.

STEP 3

Have participants review their own emergency plan for adequacy relative to a co-ordinated response.

Emergency plans exist in various forms for many areas. Participants in the planning process should review any existing plans for adequacy and how the plan contributes to a co-ordinated response. Interrelationships, responsibilities and communications are important issues for discussion at this point.

Plans requiring review are regional and local emergency management plans, police and fire plans, county and city plans, industrial plans, hospital plans and others (e.g., educating citizens how to respond to warning signals such as sirens).

Follow these suggested actions to complete Step 3:

- Contact the potential participants indentified in Step 1 and have participants review their own plans.
- Annex 4 can be provided to participants to assist them in the review of their plans relative to a co-ordinated response effort.
- Evaluate the results of the independent reviews to determine overall strengths and weaknesses of the current status of co-ordinated emergency response. A summary evaluation matrix such as Annex 10 may prove useful. Annex 6 presents also an example of a completed matrix. This will prove an overall sense of the areas where additional work is required to develop an integrated plan.
- If plan review reveals additional participants, revise the list of potential participants generated in Step 1.
- Go on to Step 4.

In many local areas in certain countries, basic core elements such as an organized fire brigade, medical response teams, structure for co-ordinated response to any emergency, etc., do not exist. In these instances, industry and local authorities/leaders will need to build the basic core elements as a crucial foundation step in the APELL Process.

Case studies

One group added hazardous materials response to an existing and workable natural disaster plan for traffic control, evacuation and shelter.

In some countries, governments require communities around nuclear power plants to have detailed community emergency response plans. In such cases, if there is a nuclear facility nearby, integration of hazardous materials into the existing community plan should reduce the overall planning workload.

One Co-ordinating Group based their efforts on the foundation provided by an industrial mutual aid organization that shared equipment and resources.

One city's 13 hospitals already had a mass casualty plan. However, industrial medical resources (doctors, protocols, antidotes) were not included until community-wide hazardous materials planning was done.

In one state in the U.S., four separate groups were charged with hazardous materials emergency responsibilities. State law had to be changed to clarify roles. In this case, a consulting team from three of the groups was established as a compromise, with the fourth group agreeing that their role was subordinate to the consulting team.

STEP 4

Identify the required response tasks which are not covered by existing plans.

The review in Step 3 should determine if all reasonable risks have been addressed. If not, then additional tasks necessary to complete the plan need to be identified. This step requires a thorough definition of what must be done, with broad-based input.

Follow these suggested actions to complete Step 4:

- Using the results of Step 3, prepare a list for each participant of missing elements or required tasks not covered (using Annex 4 as a guideline).
- Determine if the missing elements are important to the function of that participant (e.g., the fire brigade may not have proper equipment to fight certain chemical fires).
- In the context of an integrated response, identify and list required tasks which are not being covered by any group.
- Go to Step 5.

Case studies

The most common response tasks/equipment not covered in existing plans include:

- overall command authority
- communications equipment which can reach all participants
- specialized hazard monitoring and associated training
- alerting the public and co-ordinating evacuation.

STEP 5

Match these tasks to the resources available from the identified participants.

Each defined task should be assigned to the participant who can best address that aspect. Assignments should be made based on authority, jurisdiction, expertise or resources.

Follow these suggested actions to complete Step 5 :

- Evaluate each of the unassigned tasks from Step 4 separately by reviewing the list of participants from Step 1 to determine the best likely resource available to complete the task.
- Discuss the task with the identified participant to determine willingness to participate, availability of resources, and the existence of institutional roadblocks preventing use of resources.
- Work out the details of integrating that participant to complete that task in the context of the community plan.
- During review meetings, assess the benefits and problems resulting from assigning that task to that participant.
- Determine if any new problems, unassigned tasks or resource constraints will result from that assignment. If so, include these in the resolution process for new assignments.
- Monitor each task separately to assure timely resolution.
- Go on to Step 6.

Case studies

One planning group recognized that police resources were scarce and used volunteer firefighters for traffic and access control.

Another group established a multi-agency "command post" to resolve questions of "who's in charge".

Industry has often been called upon to provide equipment and training for hazardous air monitoring. Specialized firefighting equipment may also be necessary.

Communication resource problems may require sharing of radio networks and equipment.

In one community, communication to the

media was recognized as a means to reach large numbers of people quickly and procedures were established to use tone activated monitors on an emergency frequency to alert and update radio and TV stations directly. These monitors are being purchased by the individual stations at no cost to the community.

Similarly, "beepers" might be provided to near neighbours of a facility handling large quantities of hazardous materials.

STEP 6

Make changes necessary to improve existing plans, integrate them into an overall community plan and gain agreement.

Completion of Steps 4 and 5 should eliminate the resource-related problems. Integrating all plans into the community plan will reveal problems with overlapping responsibilities and complicated interfaces.

Follow these suggested actions to complete Step 6:

- Prepare a draft of the integrated plan using a format acceptable to the lead government agencies.
- Review the plan against the planning elements in Annex 4 to ensure completeness.
- Conduct a tabletop role-playing exercise to test the plan (i.e., key participants should sit around a table and describe how they would respond and interact for various emergency scenarios).
- Identify plan weaknesses and repeat Step 4 and Step 5, if necessary, to resolve these problems.
- Assure that the integrated community plan is consistent with any regional disaster preparedness plan and chemical/utility/industrial plans.
- Revise the draft plan as often as necessary until all deficiencies are eliminated and members of the Co-ordinating Group agree on the approach.
- Go on to Step 7.

Case studies

Key concepts at this step are "keep it simple" and "compromise".

Successful plans have been brief, supplemented with appendices where detailed information is necessary.

Successful plans have generally included the following based on community need:

- Telephone and contact roster
- Action guide/checklist
- Resource/capabilities list with agreement to share
- Action checklist for field use.

Comprehensive response plans are often burdensome due to their depth of detail and lack of flexibility. One such plan developed for a nuclear power station constituted five 3-ring binders with unwieldly detail. However, another nuclear power station plan was distilled into a few pages for general training and execution.

One community that was having difficulty reaching agreement assembled their chief public and private officials to develop a "strategy" rather than resolve conflict.

The resultant "strategy" was to assemble a high level planning team (Deputy Chiefs, Assistant Directors, Assistant Plant Managers, etc.) and assign them *full time* to the task. The team met at a training academy conference room and developed an acceptable plan in five 9-hour days. This was an extreme measure that worked.

STEP 7

Commit the integrated community plan to writing and obtain approvals from local governments.

Once agreement on the integrated plan has been reached, the final plan should be documented either by revising an existing community plan or preparing one where it doesn't exist.

Approvals from local governments must then be obtained.

Follow these suggested actions to complete Step 7:

- Using a small group of preparers, commit the plan to its final writing.
- Begin arrangements for written agreements among participants where necessary (mutual aid, notification formats, use of media notification outlets, specialized response personnel and equipment).
- Prepare a standard presentation to be made to those officials where approval is needed to implement plan.
- Make presentations, hold meetings and review sessions and obtain signature approvals of local officials in all appropriate jurisdictions.
- Go to Step 8.

Case studies

The key organizers for obtaining approval will vary from community to community. In our study cases these have been:

- A fire chief
- A regional official
- A plant manager

A high level "champion" of the plan will expedite community government approvals.

Written agreements are often necessary when private companies are expected to provide emergency assistance such as technical expertise or specialized equipment.

STEP 8

Educate participating groups about the integrated plan and ensure that all emergency responders are trained.

Community involvement is important throughout the planning process. However, by the time this step arrives, the Co-ordinating Group should have a definite plan for presentations. Such presentations should stress the importance of training for emergency responders.

Follow these suggested actions to complete Step 8:

- Compile a list of participating agencies or groups who will need to know more about the integrated plan.
- Make presentations to these agencies and groups to explain the plan, their roles and the type of training they should institute and/or receive.
- Identify who must be trained and prepare a training schedule.
- Develop and implement training sessions where necessary. In cases where local authorities are not equipped to train key people, industry may need to devise and implement these sessions.
- Complete field drills for hands-on training in monitoring, use of communications, traffic control, etc.
- Complete comprehensive tabletop exercises to train leaders in co-ordination and communications among participants.
- Go to Step 9.

Case studies

One regional planning team included a half-day seminar to educate and train mayors, commissioners and department heads on their roles, including media relations. Principal spokespersons for industry and all key response agencies were assigned and trained.

One planning group in the U.S. used training in the plan as an opportunity to "cross-train" agencies, so that, for example, the environmental resources department was trained by firefighters in the use of protective clothing and breathing apparatus, while the firefighters were trained by the environmental and industry experts on airborne contaminant monitoring strategies and practices on containment and diversion diking. An extra benefit was a shared awareness of the value of both functions.

One community established "speaking teams" of public and private officials, who visited public group meetings, schools, the Chamber of Commerce, and others to discuss progress.

STEP 9

Establish procedures for periodic testing, review and updating of the plan.

Emergency responders should test their plans on a regular basis. Initial testing should be done internally before "going public" with the programme. Test drills should be designed to uncover deficiencies in co-ordination among groups and training.
Any deficiencies should be corrected in the plan or the training programme.

Follow these suggested actions to complete Step 9:

- Designate a committee to prepare a test drill scenario. Members should not be part of the emergency response group.
- Prepare written scenario which identifies objectives of the drill, components of the plan to be tested, expected participants, sequence of events, simulated hazard levels. Annex 8 presents an example outline for emergency plan test drill scenario.
- Designate a group of non-participating observers to evaluate the test drill using prepared evaluation checklists.
- Using appropriate local officials, media and other outlets, alert the public and all participants that a test of the plan is scheduled. It is crucial that the public does not confuse the test with the "real thing". Panic could ensue and develop into a true emergency with tragic consequences.
- Conduct the test using the prepared scenario.
- Immediately after the test, hold critique sessions to present the results of the evaluations.
- Assign appropriate parties to correct deficiencies.
- Revise the integrated plan to correct deficiencies.
- Prepare a procedure for a formal, annual review of the plan to assure that it is kept current.
- Go to Step 10.

Case studies

Nothing can replace a full-scale emergency response drill as a means of identifying further improvement areas. Preplanning the drill, preparing a drill scenario, and its evaluation process are critical elements to a successful test.

Several communities have used elected public officials, who were involved in the planning, to serve as spokespersons. They are generally skilled at dealing with the media and they represent the public interests. It also establishes them as part of the response effort. However, to ensure that key points are reinforced, spokespersons should be provided with a "Key Talking Points" outline, stressing the co-operation of all involved and the drill's purpose of identifying further areas of improvement.

Interagency co-operation has been a key focus in many drills. For example, one fire engine is designated to provide decontamination services to paramedics and ambulance crews, or plant physicians provide support at designated emergency rooms; industrial response teams can support public agencies, or spill control activities, simulated community alerting/evacuation/return, etc.

STEP 10

Educate the general community about the integrated plan.

Opportunities for community involvement and public education should be pursued at all the previous steps in the planning process. A critical element in effective community emergency response is educating the public what to do during an emergency, where to turn for additional information, and how and when to evacuate, if necessary.

Follow these suggested actions to complete Step 10:

- Prepare a standard emergency response brochure for distribution to all residents within the potentially affected area.
- Distribute the brochure by most appropriate means (mail, door-to-door deliveries, etc.).
- Prepare a standard media kit which identifies local government and industrial plant information contacts, provides background on the plant and the integrated plan and explains where to get information during an emergency.
- Conduct a media briefing/training session to present the kit and explain what is expected of the media during an emergency.
- Implement other elements of a public education programme as described in the section titled *Community Involvement*. Possibilities include:

- a speaker's bureau for local civic groups, school assemblies, etc.
- a hazardous materials advisory committee
- media coverage of drills, training activities, presentations to local officials, etc.
- plant tours
- special symposium on chemical industry, its benefits and risks

- Periodically review and strive to improve the status of public education and community awareness programmes.

Case studies

In a co-operative environment, one company embraced the media as partners in emergency response planning, resulting in higher quality communications during emergencies and improved coverage otherwise. This may not be possible at all locations.

Several communities have used fire service and industrial personnel to instruct a course on "Media Safety at the Emergency Scene", to enhance their safety, describe operational procedures and establish relationships. This type of course must have the support of assignment editors and be repetitive since reporter turnover is high.

Plant newspaper articles and other types of communication are important to assure that industrial employees are aware of and support preparedness efforts.

ESTABLISHING A TIMETABLE TO IMPLEMENT THE APELL PROCESS

INTEREST and co-operation on the part of both industry and local community officials are required before the APELL Process can really begin. The preliminary steps leading to the formation of the Co-ordinating Group will take more or less time depending upon local circumstances. But establishment of a sequence of events and a timetable for accomplishing these is important. The timing itself will vary from community to community and is not so important, but the practice of establishing practical target dates will facilitate achievement of the goal.

Here is an example of an event schedule of the major steps in implementing the APELL Process:

Suggested Timeline

	Event
	• Handbook distributed to plant manager(s) and local authorities.
Month 1	• Member(s) from industry and/or the community take the initiative to start the APELL Process. Special efforts are made to notify important individuals or officials who may not participate in process development, but who should know that it is proceeding.
Month 2	• The key people from industry, local authorities and the community agree to participate in the APELL Process. They meet informally to identify mutual concerns, to get to know and understand each others' concerns, and to identify needs. The general approach to develop the plan is agreed to by consensus.
Month 3	• The key people form the Co-ordinating Group by: - Electing a leader(s) - Inviting others to join the Co-ordinating Group - Identifying agendas - Organizing and assigning work.
Month 4	• Subcommittees are established to conduct preliminary activities: - Identify, collect, and review existing plans (from industry and the community). - Identify, collect, and review existing

	response procedures (industry and the community). - Assess existing response capabilities (equipment and trained personnel). - Conduct a hazards analysis to screen hazards in the area (industry and the community). - Begin to prepare a community outreach plan. - Assess the potential risks of transport accidents and include them in the planning process if necessary.
Month 6	• Reports from all subcommittees: decisions on those hazard(s) to investigate further for planning purposes.
Month 7	• More detailed risk analysis completed for higher priority hazards: - Identify vulnerable zone and populations at risk. - Estimate probability of an event occurring. - Estimate seriousness of potential harm to humans and to the non-human environment.
Months 8-10	• Begin planning: - Identify what equipment is needed for response. - Identify what training is needed for responders. - Identify evacuation routes and shelters. - Develop public warning systems.
Months 10-12	• Write a draft plan.
Months 13-16	• Devise methods (tabletop and full field) to exercise the draft plan; conduct exercises.
Months 17-18	• Revise draft plan to reflect exercise results.
Months 19-20	• Complete plan and commit it to writing.
Months 21-22	• Secure plan approval by local authorities.
Months 23	• Prepare and conduct a comprehensive test drill of plan.
Months 24	• Develop means to communicate with public about plan.

Annually

Review, test, update.

Ongoing

- Revise and develop standard operating procedures of responders to coincide with plan provisions.
- Secure needed equipment.
- Provide appropriate training for responders.
- Continue dialogue with local citizens to ensure that they are informed. It will be necessary to set up an appropriate monitoring procedure for following up the progress of implementation and identifying bottlenecks or delays as they arise. Annex 9 gives a schematic version of a possible set of APELL status reports.

IMPLEMENTING THE EMERGENCY RESPONSE PLAN

THE APELL Process is designed to assist in getting prepared to respond to an emergency. Part of the planning process calls for "practice" or "drill" of the plan. The intent of this practice is to test the plan for completeness and efficiency. The drill may expose some shortcomings which require attention. If so, it is better to find them out in a simulated emergency situation than in a real emergency where life and property are at stake.

The plan developed through the APELL Process will be effective only if it is "tested" from time to time and the skills required are continually exercised by training. One way of assuring that this training is being done is to establish a formal review for the plan on an annual basis.

If the planning work is done well, the community should be prepared. If unfortunately the plan has to be implemented, it is important to review how the plan worked after the event is under control and returned to normal.

Throughout this planning process, the Co-ordinating Group should bear in mind that the plan will not necessarily involve the Group as active participants in an emergency response. The Group will in most cases *not* be responsible for emergency response, but will develop the plan for other groups and individuals through the community to resolve a hazardous situation.

ANNEXES

ANNEX 1 ELEMENTS OF A SAFETY REVIEW FOR AN INDUSTRIAL FACILITY

- Leadership and Administration
- Management and Training
- Planned Inspections
- Job Analysis and Procedures
- Accident/Incident Investigation
- Planned Job Observation
- Emergency Preparedness
- Organizational Rules and Regulations
- Accident/Incident Analysis
- Employee Training
- Personal Protective Equipment
- Health Control and Services
- Programme + Evaluation System
- Purchasing and Engineering Controls
- Personal Communications
- Group Meetings
- General Promotion
- Hiring and Placement
- Records and Reports, and
- Off-the-Job Safety.

Source: Bhopal Aftermath Review: An Assessment of the Canadian Situation (March 1988, prepared by Environment Canada).

ANNEX 2 TYPICAL COMPONENTS OF AN INDUSTRIAL FACILITY EMERGENCY RESPONSE PLAN

- **Plant Emergency Organization**
  - Designated person in charge/alternates
  - Functions of each key individual and group
  - Telephone numbers (office and home) for key people/alternates
- **Plant Risk Evaluation**
  - Quantity of hazardous materials
  - Location of hazardous materials
  - Properties of each (MSDS sheets)
  - Location of isolation valves
  - Special fire fighting procedures (if any)
  - Special handling requirements
- **Area Risk Evaluation**
  - Properties of hazardous materials at nearby plants
  - Nearby residence and population centre
  - Contacts (names, telephone numbers) at other sites
  - Established procedures for notification of chemical releases at other sites in area
- **Notification Procedures and Communications Systems**
  - Alarm Systems
  - Communication equipment (radios, hot lines, etc.)
    Emergency organization
    Plant management
    Local officials and response agencies
    Neighbouring industry
    Nearby residents
  - Names and telephone numbers (with alternates) list
  - Designated person for media contacts
  - Procedure for notifying families of injured employees
  - Central reporting office
- **Emergency Equipment and Facilities**
  - Fire fighting equipment
  - Emergency medical supplies
  - Toxic gas detectors (where needed)
  - Wind direction/speed indicators
  - Self-contained breathing apparatus
  - Protective clothing
  - Other on-site equipment to be specified according to local conditions
  - Containment capabilities
- **Procedure for returning to normal operations**
  - Interface and lines of communications with offsite officials

- **Training and Drills**
- Knowledge of chemicals (properties, toxicity, etc.)
- Procedures for reporting emergencies
- Knowledge of alarm systems
- Location of fire fighting equipment
- Use of fire fighting equipment
- Use of protective equipment (respirators, breathing air, clothing, etc.)
- Decontamination procedures for protective clothing and equipment
- Evacuation procedures
- Frequent, documented simulated emergencies

- **Regular tests of emergency organization/procedures**
- Simulated emergencies
- Documented, frequent alarm system

- Frequent tests of fire fighting equipment
- Evacuation practice
- On-going emergency preparedness committee

- **Plan Updates**
- Annual or more frequent if needed
- Reflect results of drills and tests

- **Emergency Response Procedures**
- Communications
- Evacuation or safe haven
- Medical (include handling of multiple injuries)
- Special procedures for toxic gas releases (chlorine, etc.)
- Hurricane procedures (coastal areas only)
- Utility failure procedures
- Individual unit emergency procedures
- Bomb threat procedures

- **Detailed Operating Manuals (for each process unit and utility system)**
- Start-up/Shut-down emergency procedures
- Analysis of potential incidents
- Emergency response and action to be taken for each incident

(Source: CAER)

ANNEX 3 CRITERIA FOR ASSESSING LOCAL PREPAREDNESS

INTRODUCTION

The criteria in this appendix represent a basis for assessing a regional or local hazardous materials emergency response preparedness programme. These criteria reflect the basic elements judged to be important for a successful emergency preparedness programme.

The criteria are separated into six categories, all of which are closely interrelated. These categories are hazards analysis, authority, organizational structure, communications, resources, and emergency planning.

These criteria may be used for assessing the emergency plan as well as the emergency preparedness programme in general. It must be recognized, however, that very few regional or local governments will have the need and/or capability to address all these issues and meet all these criteria to the fullest extent. Resource limitations and the results of the hazards analysis will strongly influence the necessary degree of planning and preparedness. Those local areas that do not have adequate resources are encouraged to seek assistance and take advantage of all resources that are available.

THE CRITERIA

- **Hazards Analysis**

"Hazards Analysis" includes the procedures for determining the susceptibility or vulnerability of a geographical area to a hazardous materials release, for identifying potential sources of a hazardous materials release from fixed facilities that manufacture, process, or otherwise use, store, or dispose of materials that are generally considered hazardous in an unprotected environment. This also includes an analysis of the potential or probable hazard of transporting hazardous materials through a particular area.

A hazards analysis is generally considered to consist of identification of potential hazards, determination of the vulnerability of an area as a result of the existing hazards, and an assessment of the risk of a hazardous materials release or spill.

The following criteria may assist in assessing a hazards analysis:

— Has a hazards analysis been completed for the area? If one exists, when was it last updated?

- Does the hazards analysis include the location, quantity, and types of hazardous materials that are manufactured, processed, used, disposed, or stored within the appropriate area?
- Does it include the routes by which the hazardous materials are within the vicinity of the plant?
- Have areas of public health concern been identified?
- Have sensitive environmental areas been identified?
- Have historical data on spill incidents been collected and evaluated?
- Have the levels of vulnerability and probable locations of hazardous materials incidents been identified?
- Are environmentally sensitive areas and population centres considered in analyzing the hazards of the transportation routes and fixed facilities?

• Organizational Structure

"Organization" refers to the organizational structure in place for responding to emergencies. This structure will, of course, vary considerably from locality to locality.

There are two basic types of organizations involved in emergency response operations. The first is involved in the planning and policy decision process. The second is the operational response group that functions within the precepts set forth in the local plan. Realizing that situations vary from locality to locality and that emergency planning for the regional and local level may involve the preparation of multiple situation plans or development of a single comprehensive plan, the criteria should be broadly based and designed to detect a potential flaw that would then precipitate a more detailed review.

☐ Are the following organizations included in the overall hazardous materials emergency preparedness activities?
- Industry officials, e.g., local Plant Manager(s)
- Health organizations (including mental health organizations)
- Public safety
  fire
  police
  health and safety (including occupational safety and health)
  other responders
- Transportation
- Emergency management/response planning
- Environmental organizations
- Natural resources agencies (including trustee agencies)
- Environmental agencies with responsibilities for:
  fire
  health
  water quality
  air quality
  consumer safety
- Education system (in general)
  public education
  public information
- Private sector interface
  trade organizations
  industry officials
- Labour organizations

☐ Have each organization's authorities, responsibilities, and capabilities been determined for pre-response (planning and prevention), response (implementing the plan during an incident), and post-response (clean-up and restoration) activities?

☐ Has one organization been given the command and control responsibility for these three phases of emergency response?

☐ Has a "chain of command" been established for response control through all levels of operation?

☐ Are the roles, relationships, and co-ordination procedures between government and non-government (private entities) delineated? Are they understood by all affected parties? How are they instituted (written, verbal)?

☐ Are clear interrelationships, and co-ordination procedures between government and non-government (private entities) delineated? Are they understood by all affected parties? How are they instituted (written, verbal)?

☐ Are the agencies or departments that provide technical guidance during a response the same agencies or departments that provide technical guidance in non-emergency situations? In other words, does the organizational structure vary with the type of situation to be addressed?

☐ Does the organizational structure provide a mechanism to meet regularly for planning and co-ordination?

☐ Does the organizational structure provide a mechanism to regularly exercise the response organization?

☐ Has a simulation exercise been conducted within the last year to test the organizational structure?

- ☐ Does the organizational structure provide a mechanism to review the activities conducted during a response or exercise to correct shortfalls?
- ☐ Have any limitations within the organizational structure been identified?
- ☐ Have trained and equipped incident commanders been identified?
- ☐ Has the authority for site decisions been vested in the incident commanders?
- ☐ Have the funding sources for a response been identified?
- ☐ How quickly can the response system be activated?

• Communication

"Communication" means any form or forms of exchanging information or ideas for emergency response with other entities, either internal or external to the existing organizational structure.

Co-ordination:

- ☐ Have procedures been established for co-ordination of information during a response?
- ☐ Has one organization been designated to co-ordinate communications activities?
- ☐ Have radio frequencies been established to facilitiate co-ordination between different organizations?

Information Exchange:

- ☐ Does a formal system exist for information sharing among agencies, organizations, and the private sector?
- ☐ Has a system been established to ensure that "lessons learned" are passed to the applicable organizations?

Information Dissemination:

- ☐ Has a system been identified to carry out public information/community relations activities?
- ☐ Has one organization or individual been designated to co-ordinate with or speak to the media concerning the release?
- ☐ Does a communications system/method exist to disseminate information to responders, affected public, etc.?
- ☐ Is this system available 24-hours per day?
- ☐ Have alternate systems/methods of communications been identified for use if the primary method fails?
- ☐ Does a mechanism exist to keep telephone rosters up-to-date?
- ☐ Are communications networks tested on a regular basis?

Information Sources and Data Base Sharing:

- ☐ Is a system available to provide responders with rapid information on the hazards of chemicals involved in an incident?
- ☐ Is this information available on a 24-hour basis? Is it available in computer software?
- ☐ Is a system in place to update the available information sources?

Notification Procedures:

- ☐ Have specific procedures for notification of a hazardous materials incident been developed?
- ☐ Are multiple notifications required by overlapping requirements (e.g., regional, county, local) does each have specific notification requirements?
- ☐ Does the initial notification system have a standardized list of information that is collected for each incident?
- ☐ Does a network exist for notifying and activating necessary response personnel?
- ☐ Has a central location or phone number been established for initial notification of an incident?
- ☐ Is the central location or phone number accessible on a 24-hour basis?
- ☐ Does the central location phone system have the ability to expand to a multiple line system during an emergency?

Clearing-house Functions:

- ☐ Has a central clearing-house for hazardous materials information been established with access by the public and private sector?

• Resources

"Resource" means the personnel, training, equipment, facilities, and other sources available for use in responding to hazardous materials emergencies. To the extent that the hazards analysis has identified the appropriate level of preparedness for the area, these criteria may be used in evaluating available resources of the jurisdiction undergoing review.

Personnel:

- ☐ Have the numbers of trained personnel available for hazardous materials been determined?
- ☐ Has the location of trained personnel available for hazardous materials been

determined? Are these personnel located in areas identified in the hazards analysis as:

- heavily populated;
- high hazard areas — i.e., numbers of chemical (or other hazardous materials) production facilities in well-defined areas;
- hazardous materials storage, disposal, and/or treatment facilities; and
- transit routes?

☐ Are sufficient personnel available to maintain a given level of response capability identified as being required for the area?

☐ Has the availability of special technical expertise (chemists, industrial hygienists, toxicologists, occupational health physicians, etc.) necessary for response been identified?

☐ Have limitations on the use of above personnel resources been identified?

☐ Do mutual aid agreements exist to facilitate support between organizations?

Training:

☐ Have the training needs for the regional/local area been identified?

☐ Are centralized response training facilities available?

☐ Is specialized training available covering topics such as:

- organizational structures for response actions (i.e., authorities and co-ordination);
- response actions
- equipment selection, use, and maintenance; and
- safety and first aid?

☐ Does the organizational structure provide training and cross training for or between organizations in the response mechanism?

☐ Does an organized training programme for all involved response personnel exist? Has one group been designated to co-ordinate this training?

☐ Have training standards or criteria been established for a given level of response capability? Is any certification provided upon completion of the training?

☐ Has the level of training available been matched to the responsibilities or capabilities of the personnel being trained?

☐ Does a system exist for evaluating the effectiveness of training?

☐ Does the training programme provide for "refresher courses" or some other method to ensure that personnel remain up-to-date in their level of expertise?

☐ Have resources and organizations available to provide training been identified?

☐ Have standardized curricula been established to facilitate consistent training?

Equipment:

☐ Have response equipment requirements been identified for a given level of response capability?

☐ Are the following types of equipment available?

- personal protective equipment
- first aid and other medical emergency equipment
- emergency vehicles available for hazardous materials response
- sampling equipment (air, water, soil, etc.) and other monitoring devices (e.g., explosivity meters, oxygen meters)
- analytical equipment or facilities available for sample analyses
- fire-fighting equipment/other equipment and material (bulldozers, boats, helicopters, vacuum trucks, tank trucks, chemical retardants, foam)

☐ Are sufficient quantities of each type of equipment available on a sustained basis?

☐ Is all available equipment capable of operating in the local environmental conditions?

☐ Are up-to-date equipment lists maintained? Are they computerized?

☐ Are equipment lists available to all responders?

☐ Are these lists broken down into the various types of equipment (e.g., protective clothing, monitoring instruments, medical supplies, transportation equipment)?

☐ Is there a mechanism to ensure that the lists are kept up-to-date?

☐ Have procedures necessary to obtain equipment on a 24-hour basis been identified?

☐ Does a programme exist to carry out required maintenance of equipment?

☐ Are there maintenance and repair records for each piece of equipment?

☐ Have mutual aid agreements been established for the use of specialized response equipment?

☐ Is sufficient communications equipment available for notifying personnel or to transmit information? Is the equipment of various participating responders compatible?

☐ Is transportation equipment available for moving equipment rapidly to the scene of an incident, and its state of readiness assured?

Facilities:

☐ Have facilities capable of performing rapid chemical analyses been identified?

☐ Do adequate facilities exist for storage and cleaning/reconditioning of response equipment?

☐ Have locations or facilities been identified for the storage, treatment, recycling, and disposal of wastes resulting from a release?

☐ Do adequate facilities exist for carrying out training programmes?

☐ Do facilities exist that are capable of providing medical treatment to persons injured by chemical exposure?

☐ Have facilities and procedures been identified for housing persons requiring evacuation or temporary relocation as a result of an incident?

☐ Have facilities been identified that are suitable for command centres? (See Annex 4)

(Source: Hazardous Materials Emergency Planning Guide (March 1987) prepared by the US National Response Team as NRT-1).

ANNEX 4 EMERGENCY RESPONSE PLANNING ELEMENTS

These planning elements can be used for various purposes:

— Each participant can review his or her existing plan to determine where work is needed relative to a co-ordinated response.

— The Co-ordinating Group can use this list to review any existing community plan for improvements or as a framework to develop a new integrated community plan where one does not exist.

— In areas where core elements do not exist or are minimal, the Co-ordinating Group can use this list in order to set priorities for developing and training core elements as a basic foundation for the APELL Process. Where basic core elements simply do not exist, industry may find it necessary to provide the resources for ensuring an appropriate basis for emergency response in the local area.

Review each item and evaluate its status in accordance with the key provided below.

• **Organizational Responsibilities**

— Identify key participants and describe the role of each

— Identify by title the person in charge of emergency response

— Define relationships among key participants including who takes the lead for which actions

— Describe organizations outside the community that could be called upon for additional assistance

— Define the authority/responsibility interfaces between government and industry

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• **Risk Evaluation**

— Identify the types and locations of hazards the community can face

— Identify zones of impact and number of people at risk

— Classify severity of impact in accordance with the level of emergency response that will be needed

---

• **Notification Procedures and Communication Systems**

— Identify 24-hour notification means to first responders, e.g., telephone or in absence

of reliable telephone system some other means such as beeper/radio
— Identify 24-hour notification means to officials who can provide direction and control to the response effort and who can authorize evacuation
— Describe communications systems and redundancy
— Describe the mutually agreed format and content for initial notification messages (to eliminate misunderstandings)
— Describe means for emergency responders to call for additional assistance
— Describe the means for notifying the public and identify, by title, the person responsible for notifying the public
— Describe the standard, pre-planned message formats and signals available for notifying the public
— Describe how the Co-ordinating Group will ensure that the public understands and responds to these signals.

- **Emergency Equipment and Facilities**
(See note introducing this Table)
— Identify command posts for response group
— Describe facilities available including office space, communications, emergency supplies
— List the emergency equipment available at the industrial facilities, police, fire, public works, health and disaster preparedness departments
— Describe the interface with medical facilities including current disaster plans, first aid stations, hospitals, clinics, ambulance services
— Describe hazardous material monitoring equipment available
— List protective equipment (respirators, protective clothing, etc.) available
— List the written agreements that exist for mutual aid, specialized assistance, etc.

- **Assessment Capabilities**
— Identify who is responsible for determining potential or actual extent of hazard for each type of emergency (natural, chemical, etc.)
— Describe the procedures to be used to assess the extent of hazard
— Describe the capabilities of participants on assessment teams
— Describe the monitoring equipment available to assess the hazard
— Identify experienced personal resources that may be called upon to augment local area resources

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- **Protective Action Procedures**
(See note introducing this Table)
— Identify by title the person who can authorize evacuation or sheltering
— Describe the procedure to be used to determine if protective actions are required
— Identify the group(s) responsible for conducting evacuation including notification, transport, traffic control, access control and verification of evacuation
— Describe the arrangements for special facilities (i.e., schools, nursing homes, handicapped, etc.)
— Describe the arrangements in place for reception centres/shelters for evacuees
— Describe the method for determining when protective actions are no longer needed

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- **Public Education and Information**
— Identify by title the principal spokesperson for each key group who will communicate with the media and the public during an emergency
— Describe the method for disseminating information to the media and public during an emergency including points of contact and briefing locations
— Describe the public education and community awareness programme to be conducted periodically in order to ensure that the public fully understands how to respond to an emergency situation.

- **Post-emergency Procedures**
— Identify by title the person responsible for determining that the emergency is over and for authorizing re-entry
— Describe methods to ensure that unauthorized entry will not occur
— Describe the method to be used to declare that the emergency is over
— Describe procedures to be used to return to normal including responsibility for clean-up
— Describe methods to continue monitoring an affected area
— Describe the method for investigating and documenting the emergency and evaluating the response

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- **Training and Drills**
— Identify the key participants who must be trained, who will train them and how and who will ensure that key participants can respond properly in an emergency

— Identify by title the person in each group responsible for such training
— Describe annual training programmes
— Describe the drill schedule including aspects requiring periodic drills
— Describe the training available to first responders in the use of protective equipment
— Describe how the plan is tested periodically
— Describe frequency and extent of communications tests
— Describe frequency and extent of public notification tests, and evaluation of its effectiveness
— Describe the frequency and extent of training and update briefings on hazardous materials for first responders

- **Programme Maintenance**

— Identify by title the person responsible within each group for maintaining an updated plan
— Describe the method for an annual review and revision of the plan
— Describe the method for incorporating lessons learned from drills and tests into the plan.

(Source: Hazardous Materials Emergency Planning Guide (March 1987), prepared by the US National Response Team as NRT-1).

ANNEX 5 CHECKLIST FOR EVALUATION OF EMERGENCY RESPONSE PLAN

The emergency plan, while it relates to many of the criteria discussed in Annex 8, also stands alone as a means to assess preparedness at the regional and local level. The following questions are directed more toward evaluating the plan rather than determining the preparedness level of the entity that has developed the plan. It is not sufficient to ask if there is a plan, but rather to determine if the plan that does exist adequately addresses the needs of the community or entity for which the plan was developed.

☐ Have the levels of vulnerability and probable locations of hazardous materials incidents been identified in the plan?
☐ Have areas of public health concern been identified in the plan?
☐ Have sensitive environmental areas been identified in the plan?
☐ For the hazardous materials identified in the area, does the plan include information on the chemical and physical properties of the materials, safety and emergency response information, and hazard mitigation techniques? (NOTE: it is not necessary that all this information be included in the emergency plan; the plan should, however, at least explain where such information is available).
☐ Have all appropriate groups and organizations been involved in the process of developing or reviewing the plan?
☐ Have all the appropriate groups and organizations approved the plan?
☐ Has the organizational structure and notification list defined in the plan been reviewed in the last six months?
☐ Has one group been identified in the plan as having command and control responsibility for the pre-response, response and post response phases?
☐ Does the organizational structure outlined in the plan provide a mechanism to review the activities conducted during a response or exercise to correct shortfalls?
☐ Does the plan include a communications system/method to disseminate information to responders, affected public, etc.?
☐ Has a system been identified in the plan to carry out public information/community relations activities?
☐ Has a central location or phone number been included in the plan for initial notification of an incident?
☐ Have trained and equipped incident commanders been identified in the plan?

(Source: Hazardous Materials Emergency Planning Guide (March 1987), prepared by the US National Response Team as NRT-1).

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ANNEX 6 EMERGENCY RESPONSE PLAN EVALUATION MATRIX*

	Regional				Local Governments (Country/City/Town)							Other (Industrial/ Intitutional)				
Plans Evaluated																
Planning Elements																
Organizational Responsibilities																
Risk Evaluation																
Notification Procedures and Communications Systems																
Core Elements in Place and Emergency Equipment and Facilities Readiness																
Assessment Capabilities																
Protective Action Procedures																
Public Education and Information																
Post-Emergency Procedures																
Training and Drills																
Programme Maintenance																

KEY:
A - Acceptable
B - Minimal work needed
C - Substantial work needed
N - Not applicable

* Annexes 2 and 9 present detailed information for evaluating each of the listed planning elements. Annexes 2 and 7 contain summaries of local/plant emergency plans.

EXAMPLE

	Regional				Local Governments (Country/City/Town)							Other (Industrial/ Intitutional)					
Plans Evaluated / Planning Elements	State A				County A	County B	Town A	Town B				Red Cross	Hospital A	Hospital B	Ambulance Company	Plant A	Plant B
Organizational Responsibilities	A				B	B	C	B				A	A	B	A	A	A
Risk Evaluation	A				C	B	C	C				N	N	N	N	A	A
Notification Procedures and Communications Systems	A				B	B	B	C				B	B	B	A	B	B
Core Elements in Place and Emergency Equipment and Facilities Readiness	A				C	B	C	B				A	A	A	A	A	B
Assessment Capabilities	B				C	C	C	C				N	N	N	N	B	B
Protective Action Procedures	C				C	B	C	C				C	N	N	N	B	B
Public Education and Information	C				C	C	C	C				B	C	B	B	C	C
Post-Emergency Procedures	C				C	C	C	C				B	C	B	A	B	B
Training and Drills	B				B	C	C	B				B	B	B	A	B	B
Programme Maintenance	B				B	C	C	B				B	B	B	A	B	B

ANNEX 7 BIG CITY CRISIS MANAGEMENT

Introduction

Many of the world's big cities have for a long time had certain decentralized provisions for handling special emergencies. Airplane crashes or the blocking of the traffic system by extraordinary snowfalls have usually been managed at the level of the Fire Department, the Public Works Department, and the Police. Large-scale crises, though, such as earthquakes or massive pollution of the air or the rivers brought about by chemical accidents have shown that big cities need a well prepared central co-ordination and management body which relies on established procedures as opposed to an ad-hoc set-up.

As a basis for discussion, the following suggestions for civil crisis management at the City Hall are addressed to those officials who are considering such a capacity. Each of the elements raised here can and should be discussed in more depth and detail. A basic consideration in the following suggestions is to keep the necessary manpower and technical resources to a minimum, and to use the facilities and permanent staff for other functions when there is no crisis.

The Importance of Preparation and Training

One of the most important requirements of efficient crisis management is that all structures, procedures and installations should be prepared and agreed upon *before* a crisis happens. Experience shows that the setting-up of these elements only after a catastrophe, crisis, or accident has occurred will usually lead to more confusion than co-ordination. On the other hand, one of the important rules of crisis management is that what has been agreed upon before a crisis happens should be changed only in the most exceptional circumstances during a crisis. An organization can break apart quickly if the rules are changed in the midst of high pressure of work.

This aspect holds true especially for those crisis preparations where several independent agencies such as the city government, the national police, or the regional prefect, have to co-operate closely. Who informs whom about what, when, and how often should be agreed upon very precisely.

No crisis management preparation can be effective without *recurrent training exercises* ("simulations"). Structures, procedures, and the technical equipment at a City Hall Crisis Management Centre should be tested at least once a year, possibly twice a year. Such training exercises do not have to necessarily involve all the technical equipment outside of the Crisis Management Centre, such as the actual sending out of fire engines, and public works teams. The exercises can be confined, as a so-called "staff exercise," to the central Crisis Management Centre and the crisis management centres or operations rooms of all the agencies involved in city crisis management, such as the Fire Brigade, the municipal and national police, health department, etc.

The Head of the City Hall Crisis Management Centre, therefore, should not only have the qualities of being able to work with all technical aspects of crisis management, but he should also be able to design crisis management "scenarios" and recurrent training exercises. Experiences on training and scenario building are available, and could be the subject of further discussion and study. Long-standing experience in the crisis management field shows that training exercises should not be confined exclusively to the "technicians," but that at least several decision-makers such as the Secretary-General of the City, or the Mayor himself, and agency heads from outside should take part in these exercises, in order to provide the necessary type of inputs from the typical decision-makers' and "politicians'" sphere, as opposed to a more technical view of things.

Building up the City Hall Crisis Management Centre

Drawing from the principles set out above, the City Hall Crisis Management Centre should be located in several *dedicated* rooms. Work-places for decision-makers and "technicians" should be prepared together with office material such as typewriters, plus all the necessary communication lines. To ensure a quick activation of the Centre, all these work-places have to be set down in a plan and the individual desks ("stations") should be clearly marked as to who or which functionary or agency should take over that work-place in times of crisis. It is impossible to let participants seek out their own work-places *after* something has happened. Each work-station should be provided with a set of written material, describing the tasks and responsibilities, background information, etc.

The same is true for *communications*. All telephones and telephone lines should be installed. A maximum use has to be made of *direct access telephone lines* which do not have to go through the regular City Hall switchboard, as this switchboard tends to be overloaded

and even clogged up by a multitude of calls from outside in times of crisis. A maximum use of *bilateral telephone lines,* for instance, with the most important outside agencies, should be made, as a bilateral line does not require dialling but works essentially like an interphone between two stations. The use of *tele-copiers* via telephone lines should be considered, as a maximum amount of information including drawings, plans, etc., can be transmitted in a very short time. There should be a *radio back-up* to ensure communications between the Crisis Management Centre and the outlying agencies, although no attempt should be made from the Centre to direct, for instance, individual fire-fighting units from the City Hall without going via the Fire Brigade Headquarters. The "chains of command" should always be respected.

All the communications facilities, telephone numbers, radio frequencies, etc., should be put together in a *communications plan,* and a uniform communications handbook ("telephone directory") which is available to all the participants involved in the city crisis management inside and outside the City Hall.

■ The Message Centre

Decision-making in times of crisis requires, first, a clear assessment of the crisis situation. This clear assessment, though, is frequently made very difficult by a lot of "background noise," i.e. masses of unfiltered information coming in from the outside. Decision-makers do not have the time and cannot be expected to separate this "background noise" from the essential information. This is why a crisis management centre in *any* context should always include a *"message centre"* where the incoming information is filtered, condensed, and converted into visual presentation for the decision-makers.

Visual presentation for decision-makers should at least contain two elements:

— A continuously updated chronology of events on a big board on the wall of the decision-makers' room (what has happened, when, where; and what were the actions taken, by whom?). All decision-makers can have the same status quo of knowledge by looking at this board;
— A big map of the city (e.g., behind a glass screen), where events and actions can be graphically displayed. Experiences on such techniques are available and can be further developed.

■ Separation of the decisions-makers' room from the technician's room

Long-standing experience in crisis management shows that the decision-makers' work cannot be efficient if all the other support staff of the Crisis Management Centre work in the same room. In such a case, there would be continuous interruptions by ringing telephones, messengers coming in, radios running, etc. This is why it is considered good practice to keep the decision-makers' room as quiet as possible, and to limit access to this room very severely. Apart from the decision-makers themselves, only two or three members of the City Hall's Crisis Management team should be present in order to work on the visual display of the situation, and the chronology of events. Apart from this, right of access to the decision-maker's room should be given to only one or two assistants for each decision-maker, but only to transmit messages and receive instructions.

This is why work stations should be provided *outside* the decision-makers' room for these assistants, especially for those who have come with a decision-maker who does not belong to the City Government himself, but to an administration or agency independent from the City Government (national police, regional prefect, navy, etc.).

These work stations outside of the decision-makers' room serve, so to speak, as small "embassies" for outside agencies, equipped with all necessary communications facilities and office material. Such a set-up will keep the decision-makers' room relatively quiet, and also relieve the City Hall's own crisis management staff of having to transmit instructions to outside agencies to which they do not belong.

Staffing of a Crisis Management Centre at the City Hall: The Case for a "Reservist" System

While around-the-clock crisis management at the City Hall requires considerable staffing (40 to 100 in two or three shifts), employment on a constant, around-the-year basis of many people who, except for crises, have no other functions should be avoided. The financial and psychological dimensions of staffing must be kept very much in mind.

One solution to this problem is to create a very small (2 to 5) permanent staff in order to maintain the technical facilities at the Crisis Management Centre and to draw up training

scenarios. Additionally, a number of volunteers from the ranks of the "regular" staff of the City Hall can be selected who, upon activation of the Crisis Management Centre, would join the permanent staff of that centre in order to guarantee 24-hour staffing. Again, frequent training of these "reservists" would be necessary.

An alarm plan has to be worked out in order to be able to call up all staff, even at night.

■ Extra Functions for the Permanent Staff of the Crisis Management Centre

Even a small permanent staff at the Crisis Management Centre can be charged with other tasks beyond the preparation of and training for City Hall crisis management. They could, for instance, serve as a year-round "City Hall Message Centre," with the possibility of being in direct contact with the Mayor's personal staff when he is outside the Town Hall. Permanent staff could also take over the function of providing a continuous "news flash" for the Mayor, the Secretary General, and a few other selected top officials.

■ Public Relations

The question of public relations in crisis management very often tends to be underestimated. Co-ordinated city public relations in times of crisis is not only important for political reasons (e.g. the "image" of the City Government), but is part of crisis management itself. Confused and controversial public relations during a crisis can have a negative influence on the public and may even cause panic.

This is why a city's crisis management planning should include the public relations field, and certain strict rules and procedures in this matter should be established *before* a crisis happens. One possibility would be the concentration of responsibility for all city government public relations in times of crisis under one single person, for instance the Secretary General or the Mayor's Chief Official Spokesman.

■ Learning from Crisis and Contingency Plans

It might, at first, appear not to be the proper thing to do in times of crisis, but one person at the Crisis Management Centre should be expressly charged with writing an "evaluation diary" during crisis management, in order to identify faults in the structures and procedures. Each crisis should be followed by an evaluation meeting a few weeks later in order to learn and improve management techniques.

The combined experience about past crises and the assessment of possible future crises should be amalgamated into *"contingency plans"* which cover all possible aspects of typical emergencies. Examples are contingency plans for:

— chemical accidents;
— shipping accidents;
— accidents involving nuclear material:
— extremely heavy snowfall;
— major fires.

These plans can and should then be tested in exercises as mentioned above.

SUMMARY OF SUGGESTIONS

- All structures, procedures, and installations should be prepared and agreed upon *before* a crisis happens.
- Only in the most exceptional circumstances should these procedures be changed *during* a crisis.
- No crisis management preparations can be effective without recurrent training exercises ("simulations"). Apart from the "technicians," decision-makers should also take part in these exercises, so that they can provide their own typical sort of input.
- A comprehensive information and communications plan has to be established. Each member of the crisis management effort, inside and outside the City Hall, has to have a special communications handbook, including all telephone numbers, etc.
- The City Hall Crisis Management Centre itself should be set up in a group of rooms permanently dedicated to this purpose. Each "work-station" should be assigned beforehand to one nember of the team, clearly labelled and fitted out with working material.
- A "message centre" within the Crisis Management Centre should be established to filter important from unimportant incoming information.
- Visual presentation for decision-makers: prepared maps and a "chronology board" so that all decision-makers have the same status quo of events.
- The decision-makers' room should contain a minimum number of telephones to keep it quiet. Access has to be controlled, for in-

stance with prepared, colour-coded security passes. Each decision-maker, notably those from outside agencies, should have assistants *outside* the decision-makers' room at designated work-stations in order to keep contact with their agencies.

- A "reservist system" for the City Hall crisis management team should be considered in order to keep the permanent staff at the centre to a minimum. Functions should be assigned to this permanent staff when there is no crisis.
- There must be an alarm plan for all persons participating in crisis management.
- A crisis management plan *must* include a prepared public relations plan in order to minimize giving conflicting information to the citizens.
- In any real crisis, one person should be responsible for evaluation in order to improve crisis management on the basis of practical experience.
- All practical crisis experiences plus the assessment of possible future crises should be amalgamated into individual "contingency plans" for special crisis situations.

(Source: O.E.C.D. Paper — Technical Cooperation Service (1987)).

ANNEX 8 EXAMPLE OUTLINE FOR EMERGENCY PLAN TEST DRILL SCENARIO

■ Introduction

Include a schedule, list of participants and purpose of the test.

■ Objectives and Extent of Testing

State, in detail, the objectives that the test was designed to evaluate. Define what parts of the emergency response team will be tested and what parts will simulate actions.

■ Guidelines

- ***Safety Precautions*** — General precautions necessary to protect the public, emergency responders and plant personnel.
- ***Controller/Evaluator Instructions*** — Information to assist controllers and evaluators in performing their functions.
- ***Instructions to Participants*** — Information to assist participants in performing their functions.
- ***Performance Evaluation Standards*** — Evaluation criteria and a standard grading system.

■ Scenario

- ***Initial Conditions*** — Set the stage for pre-emergency conditions.
- ***Narrative Summary*** — A brief description of the sequence of events leading to the emergency and continuing to the end of the test.
- ***Major Sequence of Events*** — A detailed timetable of when events will occur.
- ***Appendices*** — Various additional information including cue cards, controller/evaluator guides, plant data, meteorological data, hazards data (air contaminants. etc. evaluation forms).

(Source: Hazardous Materials Emergency Planning Guide (March 1987), prepared by the US National Response Team as NRT-1).

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ANNEX 9

APELL PROCESS STATUS REPORT - INDUSTRY

(Example of Status Report to be submitted at completion of each step of the process described on page 33.)

APELL PROCESS STATUS REPORT

Company: .....

Plant: .....

Location: .....

.....

Plant manager: .....

Recall of the APELL Implementation
- Plant manager completes review of handbook.
- Plant manager initiates discussion with local authorities.
- The Co-ordinating Group completes draft of the integrated plan.

Comments:

Date .....

Plant Manager Signature

Status ☐ Have received the APELL Process Handbook (Date)

.....

Step 1 ☐ Have completed my review on (date)

.....

Step 2 ☐ Have initiated discussions on the APELL Process with local emergency response official including (give the list)

Step 3 ☐ A draft of the integrated community response plan was completed (date)

Step 4 ☐ The final integrated community response plan was completed on (date) and approved by local officials on (date)

Step 5 ☐ A comprehensive test of the integrated community emergency plan was successfully completed on (date)

.....

Participants included (check all that apply):
- ☐ Plant
- ☐ State
- ☐ Town/City
- ☐ County
- ☐ Neighbouring Companies
- ☐ Other .....

.....

Step 6 ☐ Formal annual review of the integrated community emergency response plan was completed on (date)

.....

The plan revisions were completed on

.....

NOTE: Submit a copy of this report to the Co-ordinating Committee when each of the milestones has been completed.

(Source: CAER)

ANNEX 9 APELL PROCESS STATUS REPORT - LOCAL AUTHORITIES

(Example of Status Report to be prepared on completion of each step of the process described on page 33.)

APELL PROCESS STATUS REPORT

Local area: .....

Local plant(s)

included: .....

Location(s)

.....

Recall of the APELL Implementation

- Local authorities review the handbook.
- Initiation of discussions with industry managers.
- The Co-ordinating Group completes draft of the integrated plan.

Comments:

Date .....

Signature of Co-ordinating Group Leader or Representative

Status ☐ Have received the APELL Process Handbook (Date)

.....

Step 1 ☐ Have completed my review on (date)

.....

Step 2 ☐ Have initiated discussions on the APELL Process with local emergency response official including (give the list)

Step 3 ☐ A draft of the integrated community response plan was completed (date)

Step 4 ☐ The final integrated community response plan was completed on (date) and approved by local officials on (date)

Step 5 ☐ A comprehensive test of the integrated community emergency plan was successfully completed on (date)

.....

Participants included (check all that apply):

- ☐ Plant
- ☐ State
- ☐ Town/City
- ☐ County
- ☐ Neighbouring Companies
- ☐ Other .....

.....

Step 6 ☐ Formal annual review of the integrated community emergency response plan was completed on (date)

.....

The plan revisions were completed on

.....

NOTE: Submit a copy of this report to the Co-ordinating Committee when each of the milestones has been completed

ANNEX 10 OFFICERS AND AGENCIES WITH EMERGENCY RESPONSIBILITIES

- ***Law enforcement***
  Police chief
  Provincial/state representative
  Army representative
- ***Fire protection***
  Fire chief
  Volunteer fire service chief
  Provincial/state fire office
- ***Communications***
  Civil defence
  Army
  Local and provincial police
  Weather bureau
- ***Public works and utilities***
  City and provincial engineers
  Public works directorate
  Public and private utilities
- ***Health and medical services***
  City and provincial health officers
  Nursing administrator
  Hospital administrator
- ***Welfare services***
  City, provincial and state welfare officials
- ***Public information***
  Mayor/City manager
  Provincial executive
  Public relations officer
- ***Hazardous material assessment***
  Civil defence
  Fire department
  Environmental protection office
  Ministry of public works
- ***Others***
  Damage assessment officials
  Transportation services
  Legal services
  Personnel and financial services

Source: Based on UNIDO/IS.598

ANNEX 11 SOME USEFUL REFERENCES

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* Copies of the CMA guides can be obtained: Publications Fulfillment, Chemical Manufacturers Association, 2501 M Street, M.W., Washington, D.C. 20037 (USA).


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