In both stages, the assessment of the potential risk situation would focus on an analysis of the substances involved (frequently identified by governing laws and regulations), the severity of the hazards, the range of potential risk, the health and environmental effects, etc. To make this assessment, a facility risk and consequence analysis should be done. To define the nature of the potential off-site affects, information on chemical properties is essential, especially regarding delayed and long-term affects after acute exposure. Queries to factual data banks and the use of dispersion models are means by which the prerequisite information can be gathered and analysed. Because the properties and potential effects of the concerned hazardous substances are similar from location to location, a concerted international effort to capture, analyse, and disseminate such information would facilitate this step in the communication process. The involvement of the potentially affected population at this step and the other six steps has been historically useful with regard to providing feedback that has lead to, e.g., on-premise or warehouse inventory reductions, which has resulted in an overall reduction in risk.

In the identification of the targeted population, a number of considerations must be taken into account. Although the use of dispersion models, coupled with varying assumptions concerning type of installation failure and metereological conditions is very helpful in the determination of "risk zones", this alone is not sufficient. There are important differences between the potentially affected public at the pre-facility and the pre-accident stages that must be treated. Broad issues involving economics, land use, transportation, and resource availability are manifest at the pre-facility stage; whereas, the more focused issues involving accident considerations and their affected populations would be present at both stages. The "testing" and "targeting" of alternative site locations along with the provision of information on options for processes, safe technologies, traffic routes and production levels result in a much broader base of population targets at the pre-facility stage than at the pre-accident stage. Furthermore, the objectives of the information programme also differ between the two stages, thereby resulting in different audiences within the community to which the risk communications are targeted.

The target populations for both stages, however, are in need of identification so that at least the following characteristics and variations within the community are accounted for and treated:

-- Neighbourhoods with cultural and language differences;

-- Locations of hospitals, schools, and similar types of institutions;

-- Transient or high turnover populations in hotels, camps, etc.;

-- Concentrations of families with children, the aged, the infirmed;

-- Transborder populations;

-- Places of employment; and

-- Other clustering of population naturally occurring in the community due to traffic patterns and other normal (e.g., shopping, recreational, etc.) activities.

Additional population groups targeted at the pre-facility stage would include but not be limited to:

-- other industrial officials and companies and their constituent populations;

-- other government officials responsible for planning, zoning, traffic, and economic development; and

-- environmental and other citizen groups.

In defining the target audience, natural community groupings or boundaries should be used to avoid disseminating different information among members of the same community.

When identifying these populations, off-site warehousing installations must be given careful consideration due to the introduction of greater variability in the quantities and substance types covered therein. Also, urbanised areas need special population targeting treatment due to risk variation (and ultimate risk cessation) as a function of facility distance.

The assignment of roles and responsibilities to public and company officials and key community leaders needs to be "tuned" to the various parts of the population identified. Advantage should also be taken of other willing community participants, drawing upon those that are trusted (e.g., clergy, police, teachers), respected (neighborhood leaders), in frequent contact (e.g., mass media, retail trade personnel), knowledgeable peers (e.g., workers in the plant who are neighbors), and interested (e.g., volunteers, company retirees). The responsible public and company officials need to develop approaches and provide resources that will enlist and retain community communication participants representing a cross-section of the roles and skills identified in the programme.

Just as with the targeted population step, broader involvement of key officials and leaders of other industrial, public, and community groups needs to be present at the pre-facility stage so that economic, land use, transportation, and resource issues may be more fully treated than would occur at solely the pre-accident stage.

With respect to the identification of communication media, it is necessary to consider which forms are most likely to reach the targeted populations and be understood and digested by them. Empirical studies on the power and use of mass media, the need for repetition in risk communications and the desirability of having an instruction kit or

guide (with its own access and readily available support structure) are all very useful. It may be beneficial to use a combination of various approaches, including but not limited to:

-- Mailings;

-- Plant open houses;

-- Neighbourhood gatherings;

-- Public forums;

-- Audio tape distributions;

-- Simulations of emergencies and evacuations (terminating in a community picnic, company open house, or public forum);

-- Door-to-door visitations (for distribution of action cards, leaflets, audio tapes and to solicit questions and to provide answers and explanations);

-- Setup of special telephone lines with pre-recorded messages and for the provision of questions and answers;

-- Distribution of company calendars (with appropriate monthly pictures and messages);

-- Development of a risk management board game with rewards, penalties, full instructions, realistic outcomes, role models, etc.;

-- Organising raffles, awarding prizes relating to emergency management issues, and distributing buttons, T-shirts, and caps; and

-- Placement of full company emergency management programme documentation and plans at local libraries (for full public access).

Clearly, only a few of the above-cited examples would be useful during the pre-facility stage. Normally, this stage would rely heavily on the use of mass media, explanatory public forums and brochures, and the sharing of the company's industrial plans and analyses.

The development of the communication messages must contain all of the necessary contents to meet the objectives of providing information to a public that will understand, trust and retain the information. Additionally, particular attention should be given to the population targets previously identified (concerning factors such as culture, socio-economic status, family situation, sex, age, etc.) within the zone of risk to ensure that special messages needed to reach these people are in fact developed. Those persons given roles associated

with the delineated target groups need to understand their responsibilities in the delivery of specially developed messages and may need unique training and practice with such (e.g., with teachers communicating with young school age children and their parents, etc.). As appropriate, the information should allow for effective participation in decision-making processes. It must be designed so that the recipients will act properly in the event of an accident.

Since there may be substantial costs associated with developing messages to the many population targets, public assistance in co-operation with private plant funding as well as the use of volunteerism might be helpful. It is apparent that common industry sharing of generic message development with locally supplied "scripts" would serve to overcome some of this resource problem.

The specific message contents for both the pre-facility and pre-accident stages should include:

-- Explanations of the hazard;

-- Location of possible sites and, for the pre-facility stage, rationale used for rejecting or accepting particular locations;

-- Discussions of the operational control and safety methods employed, and plans for the reductions of risk;

-- Highlights of what can and can not be practically done within the risk management programme; and

-- Full and complete information (text, video, and audio) covering the warning systems, the means of protection (staying indoors vs. evacuation), the evacuation routings, how and where to get supplemental information and aid before, during, and after an emergency, and how others (schoolchildren, infirmed, etc.) will be handled during an accident.

The dynamic approach to risk communications also results in messages being received from the public audiences. Company and government officials and communicators having approached the public in a two-way communication fashion must be prepared to receive input from the public and to alter their plans and approaches if their audiences so require and instruct. To do otherwise, could jeopardise the credibility of the officials and the very communication objectives they are attempting to reach.

Determining the full extent of public participation, how and from where citizen opinions are to be gathered and "weighed", and who will have the final say, all need to be realistically ascertained before approaching any public forum with two-way communications.

Implementation of the communication programme requires a dedication and commitment of those public and private entities managing the process as well as all others involved. Not only must their commitment be present

but it also must so be communicated to the public for the obvious reasons and benefits. The management of the risk communication programme may warrant a dedicated full-time person/staff for fixed plant facilities. Attention must be paid to the timing of communication, the need for reissuing of messages and of updating as appropriate. Again, warehousing installations provide for special challenges as do transient populations.

The use of testing and feedback, both formal and informal from both the targeted audience and the communicators, needs immediate reflection in the implementation phase to allow for corrective adjustments that can provisionally be made. Long-term or systemic adjustment in the communication programme by necessity will need to wait as a function of more complete feedback and programme evaluation (relative to effectiveness, satisfaction of objectives, etc.). Statistical sampling and survey methodologies are useful tools for this purpose.

Having regard to the conclusions adopted by the Third High Level Meeting of the Chemicals Group on 17th-18th March 1987 regarding the prevention of, and response to, unintended releases of hazardous substances to the environment;

Considering that the potentially affected public has a right to be informed about the hazards to human health or the environment, including property, which could arise from accidents occurring at hazardous installations;

Considering that persons potentially affected in the event of an accident at a hazardous installation should be well-informed of measures which need to be taken by them in order to mitigate adverse consequences of such an accident;

Considering that such persons should have the opportunity to be heard, as appropriate, in decision-making processes related to prevention of, and response to, accidents involving hazardous substances;

On the proposal of the Environment Committee;

1. DECIDES that Member countries shall ensure, through the legal and procedural means they deem appropriate, that the potentially affected public:

   a) is provided with specific information on the appropriate behaviour and safety measures they should adopt in the event of an accident involving hazardous substances;

   b) is provided with general information on the nature, extent and potential off-site effects on human health or the environment, including property, of possible major accidents at a planned or existing hazardous installations*; and

   c) has access to such other available information needed to understand the nature of the possible effects of an accident (such as information on hazardous substances capable of causing serious off-site damage) and to be able to contribute effectively, as appropriate, to decisions concerning hazardous installations and the development of community emergency preparedness plans.

2. RECOMMENDS that Member countries take action to facilitate, as appropriate, opportunities for the public to comment prior to decisions being made by public authorities concerning siting and licensing of hazardous installations and the development of community emergency preparedness plans.

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* The definition of "hazardous installation" for purposes of this Decision-Recommendation is set out in paragraph 2 of the Appendix.

ANNEX I

DECISION-RECOMMENDATION OF THE COUNCIL CONCERNING PROVISION OF INFORMATION TO THE PUBLIC AND PUBLIC PARTICIPATION IN DECISION-MAKING PROCESSES RELATED TO THE PREVENTION OF, AND RESPONSE TO, ACCIDENTS INVOLVING HAZARDOUS SUBSTANCES

Adopted by the Council at its 687th session
on 8th July 1988, C(88)85(Final)

THE COUNCIL,

Having regard to Articles 5 a) and 5 b) of the Convention on the Organisation for Economic Co-operation and Development of 14th December 1960;

Having regard to paragraph 3 of Article 6 of the Convention on the Organisation for Economic Development of 14th December 1960;

Having regard to the Declaration on Anticipatory Environmental Policies adopted by the Governments of OECD Member countries and of Yugoslavia at the session of the Environment Committee at Ministerial Level on 8th May 1979 stating that "they will encourgage public participation, where possible, in the preparation of decisions with significant environmental consequences, inter alia, by providing as appropriate information on the risks, costs and benefits associated with the decisions";

Having regard to the Recommendation of the Council of 8th May 1979 on the Assessment of Projects with Significant Impact on the Environment [C(79)116] in which Member governments were recommended to "introduce, where appropriate, practical measures for informing the public and for participation by those who may be directly or indirectly affected, at suitable stages in the process of arriving at decisions on projects" having a potentially significant impact on the environment;

Having regard to the Recommendation of the Council of 26th July 1983 concerning the OECD List of Non-Confidential Data on Chemicals [C(83)98(Final)];

Having regard to the Declaration on "Environment: Resource for the Future" adopted by the Governments of OECD Member countries and of Yugoslavia at the session of the Environment Committee at Ministerial Level on 20th June 1985 stating that "they will ensure the existence of appropriate measures to control potentially hazardous installations, including measures to prevent accidents";

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* Australia abstained. Canada invoked the provisions of paragraph 3 of Article 6 of the Convention. The other Member countries agreed to apply the Decision provisionnally in the meantime.

3. RECOMMENDS that, in implementing this Decision-Recommendation, Member countries take into account the Guiding Principles set out in the Appendix.

4. INSTRUCTS the Environment Committee to review, within three years, actions taken by Member countries in pursuance of this Decision-Recommendation.

APPENDIX

GUIDING PRINCIPLES

on provision of information to the public and public participation in decision-making processes related to the prevention of, and response to, accidents involving hazardous subsances

I. GENERAL PRINCIPLES

1. The following Guiding Principles are designed to facilitate the implementation by Member countries of programmes and policies to ensure that the potentially affected public is well-informed about existing or planned hazardous installations and to facilitate the opportunities for the public to provide input, as appropriate, into decision-making by public authorities concerning such installations. These Principles do not prejudice public authorities from instituting more extensive requirements related to provision of information to the public or public participation.

2. These Guiding Principles relate to such hazardous installations defined under applicable law as being capable of giving rise to hazards sufficient to warrant the taking of precautions off-site, excluding nuclear or military installations.

3. These Guiding Principles focus on objectives to be achieved with respect to provision of information to the public and public participation, and not on the procedural approaches which should be followed. It is recognized that Member countries allocate responsibility differently between the public and private sectors and among national, regional and local governments and that Member countries have differing legal and administrative frameworks with regard to prevention of accidents and development of community emergency plans.

4. In implementing this Decision-Recommendation, Member countries should give consideration to the protection of confidiential information, as defined under domestic law, including both proprietary data and information protected for reasons of national security.

II. DIVISION OF RESPONSIBILITIES

5. Industry and public authorities each have responsibilities to the public concerning prevention of, and response to, accidents involving hazardous substances.

6. Industry is a primary source of that information which should be made publicly available. It therefore has a responsibility to provide this information to public authorities and, directly or indirectly, to the public. Industry should be prepared to work with the authorities which develop community emergency plans.

7. Public authorities have the responsibility of ensuring that adequate and timely information is provided to the potentially affected public and that appropriate opportunities are available for public participation in certain decision-making processes. Public authorities also have the responsibility of ensuring that adequate community emergency plans are in effect.

III. PROVISION OF INFORMATION TO THE PUBLIC

Information to Be Provided without Request

8. Those members of the public who might be affected were an accident to occur should be provided with certain information, without request, so that they will be aware of the hazards arising from the installation and will be able to respond appropriately should an accident occur.

9. This information should include specific guidance related to public response in the event of an accident, such as:

-- details on how the potentially affected public will be warned in the event of an accident;

-- details of the actions and behaviour the potentially affected public should take in the event of an accident; and

-- the source of post-accident information (e.g., radio or television frequencies).

It should clearly be indicated therein that the information should be read immediately and be kept in a convenient place for reference in the event of an accident.

10. The guidance on what to do in the event of an accident should be adapted to meet the needs of groups of sensitive persons, for example in schools, hospitals and homes for aged people.

11. The following information should also be provided, without request, to the potentially affected public:

-- the name of the operator of the installation and the address of the installation;

-- the common names or, if more appropriate, the generic names or the general danger classification of the substances involved at the installation which could give rise to an accident capable of causing serious off-site damage, with an indication of their principal harmful characteristics;

-- general information relating to the nature of the hazards of accidents capable of causing serious off-site damage, as well as their potential effects on human health and the environment, including property; and

-- details of how further explanatory information can be obtained.

12. The information described in paragraphs 9 and 11 should be comprehensible to the general public and be provided in a format which is easily read and understood.

13. This information should be provided in a timely fashion, be reissued periodically as appropriate, and be updated as necessary.

14. The potentially affected public should also be provided with notification of applications for siting or licensing of a hazardous installation. Decisions concerning such applications should also be publicised.

15. In those cases in which a hazardous installation is located in a frontier region and the country of such installation has transmitted to the other country information referred to above in paragraphs 9 and 11, the country receiving this information should ensure that such information is provided to all persons within its jurisdiction potentially affected in the event of an accident.

16. Arrangements should be made, before an accident, for the timely transmission of information to the public and the media in the case of an accident in order to mitigate adverse effects and to allay unjustified fears.

Information Available upon Request

17. The public should have access, upon request, to certain additional information to allow it to understand the nature of the hazards arising from hazardous installations, understand the reasons for guidance provided, and participate effectively in decision-making processes, as appropriate. Such information would include, for example:

-- any information concerning the hazardous installation which has previously been made publicly available by the installation or public authorities (as appropriate, licenses, environmental impact assessments, operating permits, safety reports, hearing documents);

-- a general description of the types of activities undertaken at the installation;

-- additional guidance concerning actions to be taken by the public to protect human health and the environment, including property, in case of an accident and the reasons for such guidance; and

-- other information necessary for effective participation in decision-making, as appropriate.