

Most accidents
are never reported

A few big ones make the news



Toulouse, France - 2001



Mozambique Floods - 2000



Mont Blanc Tunnel, France - 1999



Refinery Fire, India - 1997



Bhopal, India - 1984

NATIONAL APELL CENTRE

(Supplement to Industrial Safety News - Regn.No.19065/70)

On the occasion of
National Safety Day/
Week Campaign
(4-10 March, 2003)



APELL

NEWS



The stakeholders will be happy to learn that the National APELL Centre (NAC) is actively developing its services for strengthening the CEPPR in the country. A number of workshops and meetings have been organized and participated by us for close interactions for assessing the situation and identifying the areas/issues required to be addressed. Some of the important issues/areas so identified are:

- i) Capacity Building and Development of Guidelines for Crisis Groups
- ii) Community Awareness on HAZMAT
- iii) HAZMAT Response by Police
- iv) Developing, Evaluating & Testing Emergency Plans (particularly for Off-site Preparedness)
- v) Safety and Emergency Preparedness in HAZMAT Transportation
- vi) Guidelines on Establishment & Operation of Emergency Response Centres

I appeal to all the stakeholders to send suggestions based on their own experience and involvement in CEPPR so that we do not miss the benefit of widest possible interaction.

Upgrading and strengthening of the Fire Services (particularly the public fire services) and developing an effective system of emergency medical response as per good international practices are two other major issues which must be addressed by the Departments concerned through stakeholders participation after due assessment of their strengths and weaknesses vis-à-vis and the emergencies they are expected to respond to.

It may not be feasible for the NAC to devote attention to all the issues over a short period of time. However, we have started providing services immediately on some of the above issues. The services will be expanded and strengthened as we make progress in developing meaningful approaches/strategies, building competence and resources and providing information and training.

This issue of the Newsletter is devoted to Community Awareness on HAZMAT. It is extremely important that a credible, need-based, regular and effective-in communication system is put in place by the Local Crisis Groups aimed at the right target groups. The Newsletter gives a suggested strategy and provides information on key aspects. I fervently appeal to all the stakeholders to implement this strategy in their own local areas.

I particularly suggest that industry should actively support and participate in the activities of the Crisis Groups and make sure that such a strategy is put in place, especially as the statutory responsibility for providing information to the public rests with it also. It would not be wise to hope for funding from the state governments. It is in the interest of industry to have an informed community as such a community could be expected to provide sensible cooperation and support to it.

We are bringing out this Newsletter to coincide with the 32nd National Safety Day/Week Campaign starting from 4th March 2003 with an appeal that the Campaign may also be used as an effective vehicle for propagating Community Awareness.

K.C. Gupta

K.C. GUPTA
Director General, NSC &
Director, NAC



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HIKAL Ltd., Navi Mumbai



Workshops/Meetings for Consultation/Observation/Presentation by NAC

**Workshop with DISH Officials and MARG Members
(13th Sept. 2002 at NSC HQs, Navi Mumbai) - 31 participants
To assess status of CEPPR and invite suggestions**



Shri K.C. Gupta making a presentation on NAC .
Seen are Shri V.U. Madane, Director, Industrial Safety
& Health, Govt. of Maharashtra, Shri R.P. Bhanushali,
Adv.(Technical), NSC



Invitees from Directorate of Industrial Safety & Health, Govt. of Maharashtra and MARG
members in Mumbai

**Workshop with Police, Fire Services
and TBIA (4th Oct. 02 at NSC HQs)
19 participants Assess suitability of First
Responders Programme of 3M Corp.,USA**



Presentation of First Responders Programme for Police and Fire
Brigade. Programme had been received well in USA and Japan

**Workshop with Chairman & Sr.Officials of Heavy
Water Board (HWB) (21 Oct. 02 at NSC HQs)
Discuss areas of collaboration**



Discussion in progress. Shri S.C. Hiremath, Chairman & Chief Executive,
HWB (first in left row) alongwith his Senior Officials.

Display of APELL Publications



Also meetings were held with:

- Roha Industries Association at Roha, Dist Raigad, Maharashtra (13.08.2002)
- Citizens' Group at Vasco, Goa. (7.9.2002)

Present as an Observer:

- In a Conference on 'Disaster Prevention & Management Centre' organised by ICMA, Ankleshwar Industries Association & DPM Centre, Ankleshwar, Gujarat (19.10.2002)
- In a Workshop on 'Awareness in Chemical Emergency' organised by Chembur-Mahul MARG Group & DISH, Maharashtra. Also presented a paper on "Community Awareness" (26.11.2002)



Statutory Obligations to Provide Information to Community

Box 1

A) Factories Act, 1948

Section 41B: “Compulsory disclosure of information by the Occupier”

Sub-Section 1: “**The occupier** of every factory involving hazardous process **shall disclose** in the manner prescribed **all information** regarding dangers, including health hazards and the measures to overcome such hazards arising from the exposure to or handling **of the materials or substances** in the manufacture, transportation, storage and other processes, to the workers employed in the factory, the Chief Inspector, the local authority within whose jurisdiction the factory is situate and **the general public in the vicinity.**”

Sub-Section 3: “**The information** furnished under subsection (1) shall include **accurate information** as to the quantity, specifications and other characteristics of wastes and the manner of their disposal.”

Sub-Section 4: “**Every occupier** shall, with the approval of the Chief Inspector, **draw up an on-site emergency plan and detailed disaster control measures** for his factory and make known to the workers employed therein and **to the general public living in the vicinity of the factory** the safety measures required to be taken in the event of an **accident taking place.**”

Sub-Section 7: **The occupier** of a factory involving hazardous process shall, with the previous approval of the Chief Inspector, **lay down measures** for the handling, usage, transportation and storage of **hazardous substances** inside the factory premises and the **disposal of such substances** outside the factory premises and **publicise them** in the manner prescribed among the workers and **the general public living in the vicinity.**

B) Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989

Rule 15: “Information to be given to persons liable to be affected by a major accident:”

Sub-Rule 1: “**The occupier** shall take appropriate steps **to inform persons outside the site** either directly or through District Emergency Authority who are likely to be in an area which **may be affected by a major accident** about –

- a) the nature of the major accident hazard and
- b) the safety measures and the ‘Dos’ and ‘Don’ts’ which should be adopted in the event of a major accident.”

C) Chemical Accidents (Emergency Planning, Preparedness and Response Rules, 1996.

Rule 10: “Functions of the Local Crisis Group”:

Sub-Rule 1: “**The Local Crisis Group** shall be the body in the industrial pocket **to deal with chemical accidents** and co-ordinate efforts in planning, preparedness and mitigation of a **chemical accident.**”

Sub-Rule 2: “Without prejudice to the functions specified under sub-rule (1), the **Local Crisis Group shall –**

- a) train personnel involved in chemical accident management.
- b) **educate the population** likely to be affected in a chemical accident about the remedies and existing preparedness in the area”

Rule 13: “Information to the Public”

Sub Rule 3: “**The Local Crisis Group** shall **provide information** regarding possible chemical accident at site in the industrial pocket and related information **to the public on request.**”

Sub Rule 4: “**The Local Crisis Group** shall **assist** the Major Accident Hazard Installations in the industrial pocket in taking appropriate steps **to inform persons** likely to be **affected by a chemical accident.**”

As the Local Crisis Group represents all the stakeholders, all the above statutory provisions relating to providing information to the community (public in the vicinity) and community awareness on HAZMAT can be complied with by proposed Strategic Approach for Community Awareness. Industry also should participate in these programmes and provide necessary support thereby complying with its statutory obligation.



Landmark International Developments

A. Superfund Amendments and Reauthorization (SARA) Act of USA

Title III: Emergency Planning and Community Right-to-Know Act (EPCRA), 1986

Main purpose of the provisions is to make information available to the general public about hazardous materials being made, used or transported in the Community and to ensure that every community has a co-ordinated Emergency Response Plan. Under this Act it is required to establish State & Local Emergency Planning Committees' (SEPCs & LEPCs). Accordingly the LEPCs have been set up in that country.

The Act has three major parts sub titles A, B & C. The sub-title A lays down a framework for state and local emergency planning, while sub-tile B provides a mechanism for community awareness concerning hazardous chemicals in the locality and sub-tile C contains general provisions for trade secret protection, enforcement, civil suits and public availability of information. It also notifies Public access at locations designated by EPA, SEPC / LEPC as appropriate.

B. Responsible Care

It is launched in 1988 by the Chemical Manufacturers' Association (CMA), USA with a view to respond to public concern about the manufacture and use of chemicals. This initiative is an effort to continuously improve industry's responsible management of chemicals and calls on the industry to demonstrate its commitment to the aspects of performance relating to protection of health, safety and environment voluntarily.

The Indian Chemical Manufacturers' Association (ICMA) have formally adopted the 6 Codes as its philosophy. Over 60 industries in India are signatories to these 6 Codes. One of the Codes is 'Community Awareness and Emergency Preparedness' (CAER) Code of Management Practices. It includes Community Awareness & outrages and emergency preparedness. Community Awareness & outrages for the community includes –

- 1 On-going assessment of community questions & concerns about the facility
- 1 Outrage programme to educate responders, government officials, media, other businesses and the community about the facility's emergency response programme and risks to the community associated with the facility
- 1 Continuing dialogue with local citizens to respond to questions & concerns about Safety, Health & Environment (SHE) and to address other issues of interest to the community
- 1 Policy of openness that provides convenient ways for interested persons to become familiar with the facility, its operations and products and its efforts to protect SHE
- 1 Regular evaluation of the effectiveness of the on-going community communication efforts

C. APELL Process

United Nations Environment Programme (UNEP) has developed APELL (Awareness and Preparedness for Emergencies at Local Level) Process in 1988. The basic concept of the process is co-ordination among local authorities, industry and community focussing activities at the local level. The Process has been implemented in India by the National Safety Council and received national attention. The MOEF has institutionalised the APELL Process by notifying "Chemical Accidents (Emergency Planning, Preparedness & Response) Rules, 1996." The focus of the APELL Process is on Community Awareness in the Chemical Emergency Preparedness & Response. And now the activity for establishment and operation of the National APELL Centre (NAC) is on the anvil.



Development Approach and Proposed Services by NAC

1. Development Approach

1. Involve actively the Advisory Committee and a broad based Group of Technical Experts for wide consultations, support and guidance. Have close interactions with the stake holders through workshops, seminars, News Letter, Web-site, etc.
1. Develop a system/mechanism to monitor the status of CEPPR and identify current issues.
1. Develop strategies/approaches for addressing the identified issues progressively.
1. Develop Action Programmes at different levels and implement the same across the country by networking and pooling of resources.
1. Identify the network partners and develop them through guidance, information and training.
1. Undertake one or two Demonstration Projects in identified high risk industrial areas/transportation routes in Maharashtra and transfer this experience to the network partners.
1. Motivate the network partners to undertake demonstration projects in their areas and share their experience with the NAC for being propagated widely.
1. Identify and procure information on good international practices and training aids & materials through UNEP and the international APELL partners.
1. Mobilise financial support from governments, industry and international organisations (ILO, WHO, etc.).
1. Review and constantly evolve the Development Approach

2. Proposed Services

- i) NAC Newsletter
- ii) NAC Website
- iii) Library of Books/Videos, Softwares.
- iii) Workshops for Crisis Groups
- iv) Community Awareness on HAZMAT and Training of Community Educators
- v) Training of Traffic Police in HAZMAT Response
- vi) Development and Evaluation of Emergency Plans
 - Risk Assessment of Plants/Installations and Industrial Pockets.
 - Technical Review of Emergency Plans
 - Training in Evaluating & Testing of Emergency Plans
 - Provide observers
- vii) Hazardous Material Transportation & Emergency Response
- viii) Prepare Model Guidelines for Emergency Response Centres

- ix) Develop and Maintain Data Bank
 - Statistics of major chemical accidents
 - Information on MAH chemicals
 - Case studies of major accidents, emergency response and emergency response centres..
 - Resume of experts in the field
 - Profile of selected NGOs working in the field
 - Status papers on Preparedness
- x) Evolve the Services further.

Some of the above services have been started/ are being rendered.

ADVISORY COMMITTEE

To guide in implementing the "Establishment and Operation of the NAC", an Advisory Committee is being setup with the following composition.

- | | |
|---|------------------|
| 1. Shri C.B. Garware, Chairman, NSC | Chairman |
| 2. Shri K.C. Gupta, DG, NSC & Director, NAC | Member Secretary |
| 3. Mr. Fritz Balku, Head, Production & Consumption Branch UNEP DTIE, Paris | Member |
| Or
Mr. Niclas Svenningsen
Regional Industry Officer
UNEP, Bangkok | |
| 4. The Director,
Hazardous Substances Division,
Ministry of Environment & Forests
Govt. of India, New Delhi | Member |
| 5. Mr. Herman Van der Laan, Director
ILO Office for India, New Delhi | Member |
| 6. Shri Ashok Khot, Principal Secretary (Labour)
Department of Labour, Govt. of Maharashtra & Member Secretary
Maharashtra State Crisis Group, Mumbai | Member |
| 7. Shri S.N. Singh, President
Indian Chemical Manufacturers Association | Member |
| 8. Shri K.P. Nyati, Head – Env. Mgt. Division
Confederation of Indian Industry, New Delhi | Member |
| 9. Shri Dinesh T. Parekh, President
Thane-Belapur Industries Association (TBIA),
Navi Mumbai | Member |
| Or
Shri Bipin N. Shah, Vice President, TBIA | |
| 10. Dr. P.K. Gupta, Director
National Cleaner Production Centre
National Productivity Council, New Delhi | Member |
| 11. Dr. Ligia Noronha, Area Convener/In-Charge
Western Regional Centre
Tata Energy Research Institute (TERI)
Panaji, Goa | Member |
| 12. An NGO in Mumbai working in the field | Member |



Strategy for Community Awareness on HAZMAT

Key Importance of Proper Community Awareness

- Because of the statutory provisions, industry is obliged to provide appropriate information to the community living in the vicinity of a hazardous plant/installation.
- However, it is more important is to realize that a well informed community is an asset to both the industry and local authorities as it would offer better and willing cooperation not only during an emergency but even in other development programmes.
- A proper rapport between the local authorities, industry and community creates tremendous good-will for industry

Suggested Strategy

To be effective, the community awareness activities should be undertaken as per a strategy developed after due deliberations among the stakeholders in the LCG. The essential features of such a strategy are:

- **Credibility** - It is absolutely necessary to ensure that the information provided to the community and the activities undertaken for its propagation are fully credible. Since the Local Crisis Groups represent all the stakeholders and community awareness is one of their functions, the information and activities should be approved by the LCG and released/undertaken on its behalf.
- **Need-based** - The information provided should be need-based relating to hazardous chemicals "handled" and the type of accidents/emergencies encountered in the Industrial Area to which the community belongs.
 - Too much information should be avoided
- **Regularity**
 - On-off approach must be avoided
 - Regular system should be in place so that the community can seek information on their own as and when they feel the need of doing so. Further a visible impact can only be ensured if the awareness/education activities are undertaken regularly.
- **Community Information Representative (CIR)**

A suitable nodal person may be designated by the LCG to function as CIR and made known in the Industrial Area. Such a person could be from a reputed NGO represented on the LCG. The CIR should use the facilities (lecture hall, audio visual aids, etc.) already available in the Industrial Area.
- **Effective-in-Communication**

The information released should be simple supported by pictorial representations as far as practicable and issued in the local languages, Hindi and English. Further, for effective communication, it is not enough to issue only written information through leaflets. It should be supplemented by regular Awareness Sessions (about 2 hrs duration). Use of video alongwith the lecture would contribute to proper understanding. A required number of Community Educators can be trained in making the communication more effective. Besides the general

information, information on specific chemicals handled in the Industrial Area could be given to individuals who may ask for such information.

• Target Groups

Persons to be exposed to the awareness/educational activities should be carefully selected by discussion in the LCGs. Opinion makers who interact with Community and are respected by it such as the college/school teachers, Students, Office Bearers of Mahila Mandals, residential cooperative Societies, hospital representatives, etc. are in a position to place an important role in developing community awareness and could be selected as target groups. The number of persons to be exposed should also be estimated through proper discussion.

• Supplementary Activities

To supplement the above activities, the Community Awareness Information could be displayed in places frequently visited by the public, such as the Municipal Ward Office, Rationing Office, hospitals/dispensaries, school/colleges, bus stops, railway stations, etc. Various other innovative/creative means such as shopping bags, (see case study of LEPC Pasadena), insert in the telephone directory etc. as decided by the LCG could also be used effectively. Community festivals could also be used.

NAC would be happy to provide further guidance and training for the Community Educators as a part of its demonstration projects to be undertaken in selected Industrial Areas in Maharashtra.

Stakeholders

- Crisis Groups set up at various levels under the Chemical Accidents (Emergency, Planning, Preparedness and Response) Rules, 1996
- Govt. Authorities, Regulatory Agencies
- Industry, Industry Associations
- MARG Groups
- Community based Organisations
- Opinion Makers
- Educational Institutions
- Media

Chemical Emergency Prevention, Preparedness and Response (CEPPR)

It may be reemphasised that Prevention of Chemical Accidents through effective safety management systems remains the first priority. But it is also absolutely necessary to adequately strengthen emergency preparedness and response. This requires much greater and concerted action from all the stake holders to come up to good international standards.



The Public Liability Insurance Act and Rules, 1991

The objective is to provide for mandatory Public Liability Insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance on principle of no -fault liability.

Under the Act 'handling' means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, distruction, conversion, offering for sale, transfer or the like of any hazardous substances and 'owner' means a person who owns, or has control over handling of such hazardous substance at the time of accidents.

Section 3 : Liability to give relief in certain cases on principle of no fault.

- 1) Where death or injury to a person (except a workman) or damage to property has resulted from an accident, the owner shall be liable to give specified relief.
- 2) In any claim for relief, the claimant shall not be required to plead and establish that the death, injury or damage was due to any wrongful act, neglect or default of any person.

Section 4 : Duty of owner to take out insurance policies.

- 1) Every owner shall take out, before he starts handling any hazardous substance, one or more insurance policies against liability to give relief.
- 2) Every owner shall get the above insurance policies renewed

from time to time so that they remain in force during the period such handling is continued.

- 2A) Every insurance policy shall be for an amount equal to the paid-up capital of the undertaking handling any hazardous substances but not exceeding fifty crore rupees.
- 2C)- Every owner shall also pay to the insurer alongwith the premium , a contribution, not exceeding the premium amount, for crediting to the Environmental Relief Fund.

Section 7A : Establishment of Environmental Relief Fund.

- 1) The Central Government may, by notification, establish a fund to be known as the Environmental Relief Fund.

Rule 10 : Extent of liability

- 1) The maximum aggregate liability of the insurer to pay relief under an award to the several claimants arising out of an accident shall not exceed rupees five crores and in case of more than one accident during the currency of the policy or one year, whichever is less shall not exceed rupees fifteen crores in the aggregate.
- 3) Any award for relief which exceeds the amount payable under insurance policy shall be met from the Relief Fund and in case the award exceeds the total of the amount of insurance and the relief fund, the amount which falls short of such sum payable shall be met by the owner.

What Preparedness Means in Practice?

The Community should:

- know alarm signals
- follow evacuation plans
- know what to do in an accident
- have adapted buildings
- connect to appropriate news services in a crisis

Industry must arrange for:

- sharing of results of risk and consequence analysis
- implementation of risk reduction measures
- linking its rescue services
- public communication in a crisis
- establishing buffer zones

Rescue services need:

- * equipment and training
- * local hazard maps
- * to be linked with private rescue services
- * arrangements for traffic management
- * communication channels with public during crisis

Government authorities should take steps for:

- * safe land-use planning
- * safe chemical transport
- * legislation on risky procedures and processes
- * making public information available on risks
- * creating emergency services
- * having medical services ready for a crisis

National authorities may also contribute to local preparedness by linking with national programmes on disaster management.

(Source: APELL Handbook)



Case Study - LEPC, Pasadena, USA on Community Awareness Programme

NSC had implemented APELL-LAMP Action Programme on CEPPR (1992-97), in six high risk industrial areas across the country. As a part of the Programme, 5 Community Awareness Workshops were held one each at Navi Mumbai, Cochin, Kanpur, Chennai and Haldia. In these Workshops experts from LEPCs of Cities of Pasadena and Baytown, Texas, USA had been invited.

LEPC, Pasadena is actively providing information and educating the community on Emergency Planning and Community Right-to-Know Act under the Superfund Amendment and Reauthorisation Act (SARA Title-III) (See Box-2 page 4). Some of the ways used by it are given below.

1. MASCOT



Wally Wise Guy: Costumed character to be used only as a promotion- vehicle used for the awareness of shelter in place.

2. GROCERY BAG



Distribution of grocery bags having printed instructions on what to do in a chemical emergency?

3. MESSAGE/FLYER

Pasadena has installed an emergency siren system to alert citizens of possible dangers such as chemical emergencies, natural and man-made disasters and national security threats.

When you hear the emergency siren, follow these directions calmly-but immediately:

- Go indoors.
- Tune to KTRH 740 AM - Emergency Broadcast Station.
- DO NOT call 911 or the City of Pasadena. Such calls could hinder response activities.
- Remain indoors until further notice.
- Stay tuned to your radio for further information.

Recognize these siren signals



- 1 minute of continuous tone = test
- 3 minutes of continuous tone = go indoors and remain





4. INSERTION IN TELEPHONE BOOK

In Case of Chemical Emergency

11

Shelter in Place

1. SHELTER IN PLACE is a proven, effective emergency protective action. In the event of a chemical emergency, you may be told to SHELTER IN PLACE rather than to evacuate.
2. Go inside your home or some other building, preferably in a room with no or few windows.
3. Listen to the radio or television for further advice.
4. Turn off heating or cooling systems, turn off window and other fans, shut your windows, doors, fireplace dampers, and cover cracks with tape or wet rags, if available.
5. If you are told to protect your breathing, cover your nose and mouth with a handkerchief or other cloth, wet if possible.
6. Keep your pets inside.
7. Stay inside until your radio or television says you can leave safely.
8. As soon as it can be determined that the hazardous condition has passed, local authorities will announce the emergency is over. If the emergency involved a hazardous material cloud, at the "all clear" you will be instructed to open windows and doors, ventilate the Building and go outside.

Evacuate

1. An EVACUATION may be ordered by local authorities.
2. Radio and television broadcasts will specify which areas of the community must evacuate.
3. If you have children in school, do not call or travel to the schools. They will be taken to the reception center for their school, as specified in their school's emergency response plan.
4. Pack only what you need most. Take clothes, medicine, baby supplies, portable radio, flashlight, checkbook and credit cards.
5. Lock your house and turn on your porch light as you leave.
6. Use your own car if you can. Take neighbours who need a ride. If you have room. If you have no ride, ask one of your neighbours for a ride. If you cannot do that walk to a main road. You may be able to get a ride there.
7. Turn on your car radio for information.
8. Keep all car windows and vents closed while driving.
9. Authorized personnel will be stationed along major routes to direct you away from the emergency area toward a reception center.
10. Security personnel will be in place in the evacuated areas to prevent looting, vandalism, etc.
11. You may return to your home as soon as the emergency is declared over and it is safe to return.
12. If the emergency involved a hazardous material cloud open all windows and doors to ventilate the building when you return home.

NOTICE : Information on this page was provided by various organizations outside of Southwestern Bell Telephone Company. Southwestern Bell Telephone Company in no way guarantees the accuracy of this information and is not responsible for its correctness and does not assume any liability for any errors or omissions in the material or for any actions undertaken by any person in utilizing the information contained on these pages. The above page is found on Page 11 in the White Pages, Houston Telephone Directory. We are currently working to place same message in regional phone directories.

5. WALLY'S SONG

Wally Wise is in the know,
 when you hear the siren blow.
 In the building you must go and
 tune into the radio-
 stay on the phone,
 listen 'til you hear the next siren
 that say all clear'.

Words adapted & Music by -
 Jamey Dudley



Examples - Indian Scenario on Community Awareness

Under the Chemical Accidents (Emergency Planning, Preparedness & Response) Rules, 1996 Crisis Groups have been set up at different levels in the country. Some of the Local Crisis Groups are providing information to the community.

- A leaflet published by LCG, Navi Mumbai Municipal Corporation Area.



WELL ORGANISED, CO-ORDINATED AND REGULARLY SUSTAINED EFFORTS ARE REQUIRED