5 emergency planning and response

Increase in accidents or increase in enforcement/reporting?

The increased regulatory attention to emergency planning and response identified for 2002 persists for 2003. Industrial facilities are required to make more information available to the public and face more stringent enforcement by the authorities with respect to emergency planning and response. The Figure below provides an overview of the 10 countries with the most chemical accidents and the Top 10 chemicals involved in reported chemical incidents in the Chemical Incidents Report Center (CIRC) database in 2002.

2002 Major Accidents

Top 10 Countries	No. of Fatalities*	Top 10 Chemicals	No. of Incidents
China, PR	622 (86)	Not specified	261 (28)
India	93 (38)	Ammonia (anhydrous)	45 (17)
United States	82 (40)	Chlorine	41 (16)
Ukraine	66 †	Propane	39 (10)
Nigeria	49 †	Gas, type not specified	39 (9)
Pakistan	21 †	Oil	32 (19)
Kazakhstan	19 †	Hydrochloric acid	22 (14)
Vietnam	18 †	Sulfuric Aci	22 (7)
Indonesia	16 †	Gasoline	18 (9)
Algeria	13 †	Methane	15 †
TOTAL	879 (291)		

**This number may be an estimated amount. Number in brackets gives no. for 2001.*
† Denotes information not available for 2001

It is evident from the figure above that there has been a steep overall increase in number of reported accidents. The reasons for this increase can be due to one of two reasons: either there has been a severe deterioration of accident management in the countries in question and in relation to the chemicals concerned, or, and which is more likely, increased reporting and enforcement procedures in the aftermath of major accidents in e.g. Toulouse, France; Baia Mare, Romania; and Enschede, The Netherlands.

This increased awareness and impetus to prevent and control major accident hazards involving chemicals has resulted in greater transparency and an increase in available information on chemical accidents. This is likely to affect industries with high chemical use, as they will need to invest more time and money in ensuring they have the correct emergency procedures in place, etc. It is also interesting to note that the accident statistics relating to specific chemical types refer to widely used chemicals, which are often used in bulk.

Amongst the regulatory developments noted in this regard in 2002 are:

Austria - Ordinance on Liquid Gas **[ID 5560]**

France - Decrees relating to the prevention of explosion **[ID 5666]**

France - revised draft law on the control of technological and natural risks and on the compensation for damage **[ID 4935]**

Hungary - Joint Decree 25/2000 on Chemical Safety at Work **[ID 4217]**

Hungary - Decree 208/2002 on Fire Protection Fines **[ID 5568]**

Hungary - Amendments to the 1996 Decree concerning on facility fire brigades **[ID 5225]**

Norway - Regulation relating to flammable goods **[ID 3344]**

Norway - Act No. 20/2002 on protection against fire, explosion and accidents with hazardous materials **[ID 4835]**

Portugal - Decree-Law 139/2002 establishing safety requirements for the production and storage of explosives **[ID 5198]**

Portugal - Ordinance 1276/2002 on fire safety requirements for administrative buildings **[ID 5557]**

Australia - Second Edition of the Control of Major Hazard Facilities National Standard [NOHSC:1014(2002)] **[ID 4852]**

Australia-Victoria - Occupational Health and Safety (Major Hazard Facilities) (Amendment) Regulations 2002 **[ID 3432]**

China - Implementing Measures for Hazardous Chemicals Registration Management regarding the emergency number and the conditions for the emergency phone **[ID 5603]**

China - Measures for Hazardous Chemicals Sales Permit Management **[ID 5605, ID 5604]**

Hong Kong - Fire Safety (Buildings) Ordinance (Ord. No. 21 of 2002) **[ID 5402]**

Malaysia - Fire Services (Fire Certificate) (Amendment) Regulations 2002 (P.U.(A)334) **[ID 5384]**

New Zealand - draft New Zealand Injury Prevention Strategy **[ID 5582]**

Singapore - Amended Code of Practice for Fire Precautions in Buildings 2002 **[ID 5230]**

South Korea - Amendments to the Regulation on the Technical Standards for Fire Prevention **[ID 5642]**

Brazil - Ordinance 38/2002 containing a proposal for an overhauled Regulatory Norm (NR) 20 on Combustible Liquids, Flammable Liquids and Gases [ID 5677]

Brazil - CONAMA Resolution 293 on Individual Emergency Plans for the Petroleum Industry [ID 5015]

Canada - proposed Environmental Emergency Regulations [ID 5385]

Colombia - Decree 1609/2002 establishing the technical operational and safety requirements for handling and transporting dangerous goods by road [ID 5518]

United States - Revised OSHA requirements for exit routes, emergency action plans, and fire prevention plans [ID 5624]

United States - OSHA directive for inspectors for the uniform application of the OSHA standard on emergency action plans and fire prevention plans [ID 5461]

On the web:

UNEP APELL
http://www.uneptie.org/pc/apell/home.html
The UNEP site on Awareness and Preparedness for Emergencies at Local Level (APELL) provides information on some 20 major accidents that occurred in the last two years, as well as a database on some 200 major accidents from the last decades. It also provides handbooks and technical reports on emergency prevention and response.

Chemical Incidents Report Center (CIRC) database
http://www.csb.gov/circ/
The U.S. Chemical Safety and Hazard Investigation Board promotes the prevention of major chemical accidents at fixed facilities. The site provides access to a database with records of some 1500 chemical accidents worldwide.

Emergency Events Database (EMDAT)
http://www.cred.be/emdat/intro.html
EMDAT contains essential core data on the occurrence and effects of over 12,500 mass disasters in the world from 1900 to present (updated weekly). Database search possibilities and Country Profiles.

OECD Page on Chemical Accidents
http://www1.oecd.org/ehs/accident.htm
The site provides a chemical accident thesaurus, an online version of the OECD Guiding Principles for Chemical Accident Prevention, Preparedness and Response, a description of the work programme, several reports on the issue and a list of internet links to national and international sites.

US National Response Centre
http://www.nrc.uscg.mil/foia.htm
The National Response Center recently implemented an on-line query system that makes all oil and chemical spill data in the US since 1982 available on the internet. One can query by company name, city, type of incident, etc.

French Inventory of Accidents
http://aria.environnement.gouv.fr/ (In French)
Provides an updated database with a description of some 1800 industrial accidents and an analysis of some 13900 accidents, both in France and worldwide. Looks at accidents by subject and by industrial sector.

UNECE Convention on Industrial Accidents
http://www.unece.org/env/teia/welcome.html
The UNECE site on the Helsinki Convention on the Transboundary Effects of Industrial Accidents provides background information on how the Convention is being implemented: industrial accidents notification system, preparatory work for a civil liability agreement, an overview of the regulatory framework in all the participating countries, etc.

US-OSHA Emergency Response Website
http://www.osha-slc.gov/SLTC/emergencyresponse/
Guidance and information on Emergency Response requirements.

Seveso II Revision to affect more facilities, but seeks to encourage R&D [ID 286]

It is expected that the proposed revision of European Directive 96/82/EC (the "Seveso II" Directive) will be adopted in June/July 2003. In February 2003 the Council of Ministers and the European Commission reached a Common Position on the proposed amendments. At the time of going to press (April 2003), the proposed amendments are awaiting their second reading in the European Parliament. The Seveso II revision would, amongst other things:

- Introduce reduced threshold quantities for explosives and pyrotechnics;
- Add 8 carcinogens but increase qualifying quantities (to the benefit of research facilities);
- Broadened to include medium and heavy oil distillates with reduced qualifying quantities; and
- Reduce qualifying quantities for R50 substances (Very toxic to aquatic organisms).

As a result of these development, an increasing number of facilities will fall within the scope of the Seveso II Directive. In the UK, the Government estimates that an extra 220 sites are expected to come within its scope for the first time or will move from the lower to the higher tier of control. A variety of Seveso II related regulatory activity occurred throughout Europe in 2002 and is likely to continue throughout 2003 and 2004. For example, legislation in this regard was strengthened in Austria **[ID 5427]**; Belgium **[ID 4661]**; France **[ID 5042** + **ID 5666]**; Hungary **[ID 4416]**; Italy **[ID 643, ID 5123]**; Netherlands **[ID 4981]**; Sweden **[ID 1626]** and the United Kingdom **[ID 5370]**.

Web-links:

European Commission site on Chemical Accident Prevention, Preparedness and Response
http://europa.eu.int/comm/environment/seveso/
Detailed and background information on Seveso II Directive 96/82/EC.

EU Major Accidents Hazard Bureau
http://mahbsrv.jrc.it/
The site provides access to the Major Accident Reporting System database, as well as to the Community Documentation Centre on Industrial Risk. Numerous guidance documents available and access to chemicals database.

Environment Agency (UK) website on Control of Major Accident Hazards (COMAH)
http://www.environment-agency.gov.uk/netregs_new/275207/275408/?version=1&lang=_e
Guidance on UK legislation which seeks to ensure that businesses take measures to prevent major accidents and to limit the consequences should an accident occur.

Hazardous Installations Directorate (HID) of the Health and Safety Executive (UK):
http://www.hse.gov.uk/hid/index.htm
Provides guidance and information on HID's work on the management of health and safety in high hazard industries and the control of major hazards events. HID manages this area of work through proactive/reactive inspection, the assessment of safety cases/reports, the provision of technical advice and input to national/international standards and by the development and maintenance of publications, procedures and guidance.

Substantial Regulatory Activity identified in relation to occupational H&S incident/accident reporting

Throughout the course of 2002, ENHESA has noted a significant amount of regulatory activity in relation to the notification and reporting of occupational accidents. The developments have been identified globally, which indicates an overall tendency to improve notification of occupational accidents.

Developments of note include, amongst others:

- the adoption in Denmark of a Statutory Order on the notification of occupational accidents, short-term injuries and sudden lifting injuries [ID 2786];
- the adoption in South Korea of amendments to the Industrial Safety and Health Act which newly inserts requirements on record-keeping on industrial accidents [ID 5572];
- the adoption in the Netherlands of an Act where under information regarding the unsuitability of work places at large facilities will be made public; [ID 5570]
- the adoption in Puerto Rico of legislation on occupational safety and health requiring notification of accidents [ID 5632 & ID 5633];
- the adoption in China of Measures for Investigation and Handling of Occupational Illness Incidents [ID 5298]; and
- the adoption in South Africa of an amendment to the occupational health and safety reporting form [ID 5034].

The Figure below highlights the occupational accident statistics as collected by the ILO during 2002. It is evident from this that reporting of accidents is generally much more advanced in America and Europe than in Asia, Africa or Oceania. However, with the global development of regulations and increased awareness of reporting obligations, the difference between the developed and developing worlds is likely to be reduced in the coming years.

Accident Statistics 2002 (2001)

	Fatal accidents*	3 days' absence accidents*
Europe	42,53	13.956
America	39,94	13.516
Asia	15,26	338
Africa	58,07	3.948
Oceania	29.18	12.290

** per million workers reported to the ILO*

On the web:

International Labour Organisation - Safework
http://www.ilo.org/public/english/protection/safework/accidis/globest_2002/reg_world.htm
Provides a summary by ILO region of occupational accident statistics.

US Department of Labor Accident Reports
http://www.osha.gov/OshDoc/toc_FatalFacts.html
A database of 73 fatal accidents, how they arose and how to avoid similar incidents in the future.

Health and Safety Executive (UK) - Incident Contact Centre
http://www.riddor.gov.uk/#
Website enabling on-line reporting of occupational incidents/accidents, as required by the RIDDOR Regulations 1995. Statistics to be included.

European OSH Statistics
http://europe.osha.eu.int/statistics/index2.php3
In 1990, the European Commission launched a scheme to harmonise data on health and safety at work, known as ESAW ("European Statistics on Accidents at Work"). Provides a variety of links to European health and safety statistics.