

Report of the International Control Banding Workshop, London November 2002.

Background

Prevention of risks to the health of the working population through exposure to chemicals is a global concern: it has been the focus of much scientific and regulatory action for more than a century. This effort has mainly been directed at large industries and the chemical agents and diseases associated with them and the tools to assist intervention have been developed for these large scale enterprises which have access to skilled and costly professional support. Attention is now being given to the management of risks in small and micro businesses where these services may not be available through lack of knowledge, geography, or financial constraints. A programme of work carried out by the UK Health and Safety Executive (HSE) to gain an understanding of the capabilities and practices of small businesses in assessing and managing chemicals gave cause to question the usefulness of existing methods such as Occupational Exposure Limits (OELs) in this sector and provided the impetus for the development of simpler means of guiding practical control measures.

Further work was undertaken by the HSE to establish how small businesses using chemicals gained their advice and decided what action to take. The businesses were found to be :-

- Dependent on an oral not written culture. Information was spread by word, not in writing, raising questions as to the effectiveness of written guidance.
- Dependent on suppliers, not the regulatory authority, for health and safety advice.
- Often of poor literacy. Managers often had a formal reading age of below 12 years although they knew the complex terms relating to their business needs.
- Generally of the opinion that their chemicals were not dangerous.
- Largely unaware of the health effects of the chemicals they used. Knowledge was better regarding acute, rather than long term effects.
- Dependent on "custom and practice" not risk assessment for the control they applied.

In getting effective controls introduced into the small business, and probably in all business, it is necessary to mesh with their systems. The use of OELs directly by such enterprises will be very limited. The cost and complexity within the business will be very great, often prohibitively so. Resource might be bought in but this is unavailable in much of the world, particularly in developing countries. If this is measured by the membership of the International Occupational Hygiene Association (IOHA) the NGO representing the organised professional hygiene professionals worldwide, resource is largely centred on North America and Western Europe. Demands on health care systems are high and calls on scarce resource must be matched by clear benefit. The cost of equipment to assess exposure and compare it with OELs may exceed the annual salary of the health professionals and the capacity to use the information is often restricted to academia and government and not available to the business.

One approach to controlling risk from inhalation exposure, developed in the UK and now being taken forward internationally, is aimed at meeting the needs of small businesses as determined by the HSE in their studies. It is the concept of Control Banding. In this system the hazard classification of the chemical, denoted by a Risk Phrase (such as "may cause cancer") which is agreed internationally, is associated with estimates of the range of airborne exposures that toxicologists judge to be appropriate for a substance with such properties. This approach is used to produce 5 groupings of "R" phrases that relate to different levels of control of exposure. From this a simple decision tree leads to practical control suggestions developed by hygienists with expertise in each particular business. No measurement is needed and the user will find detailed help on the control likely needed on the process – all of the information the user needs to use the system should be readily available – the "R" phrases from the supplier, the likelihood of the material becoming airborne and the quantity used from observation, supported by guidance in the user guide. The user will be led through the most appropriate of 4 control strategies for his particular situation.

The success of this approach in the UK led to collaboration between the UK HSE, IOHA and the International Labour Organization (ILO) to produce a system for global use. Known as the Chemical Control Toolkit or ILO Toolkit, it has been used and adapted for use in several countries. It was important to capture what has been learned by those who have used Control Banding around the world and to share lessons learned. To facilitate this, the British Occupational Hygiene Society (BOHS), British Institute of Occupational Hygienists (BIOH) and the UK HSE hosted an international workshop on Control Banding which was held in London in November 2002. The workshop was co-sponsored by IOHA, The World Health Organization (WHO) and ILO whose aim was that the workshop should provide the impetus to promote a co-ordinated approach to advance the use of Control Banding internationally.

The Workshop.

Presenters from industry, academia, health professionals and regulators, with practical experience in Control Banding described their experiences and shared what they had learned – both what works and what doesn't. The presentations covered the broad scope of the Control Banding technique – from the sophistication of the development of software tools such as Solbase in the Netherlands, and further developments to the UK HSE COSHH Essentials Control Banding tool (on which the ILO Toolkit was based) – to experience of using an adapted version of the ILO Toolkit in Indonesia. Consistent messages were delivered that apply to all situations and reiterate the findings of the HSE studies. The system must be simple to use, and compatible with the methods of working already in place at the workplace.

Discussions made it clear that “one size does not fit all”. Representatives from the pharmaceutical industry described the value of Control Banding in their highly advanced manufacturing facilities where they have “millions” of “discovery compounds” for which there is no data and they use a set of default control options to protect against exposure, while a presentation depicting the conditions and practices in workplaces in Indonesia (where an adaptation of the Chemical Control Toolkit has been trialled by the German Gesellschaft für Technische Zusammenarbeit (GTZ) Project On Chemical Safety) were shocking when compared to workplaces in Western Europe and North America. The GTZ Toolkit adaptation is called the Chemical Management Guide and it promotes a holistic chemical management system. Key learning points from the Indonesian trial were that in order for the system to be understood and used by people in the businesses it must be taught, whereas in the UK the internet based COSHH essentials is being used successfully with only the online guidance as instruction. Another important lesson, especially in countries where there is little regulatory pressure to control chemicals, was to be able to demonstrate to business owners and managers that controlling chemicals successfully not only helps protect worker health and prevents environmental contamination, but that it reduces waste and loss and helps the company achieve the social and quality standards that countries they export to are increasingly demanding.

Prof Fengsheng He, Director of the WHO Collaborating Centre at the Chinese Center for Disease Control in Beijing and Dr. Emilia Ivanovich of the WHO Collaborating Centre at the National Centres of Hygiene and Medical Ecology in Sofia, Bulgaria attended the conference. Both Centres plan to translate and pilot control banding efforts in their countries, as part of the WHO 2001-2005 Collaborating Center Global Work Plan. IOHA will provide technical assistance.

Outcomes

A major success of the workshop was to demonstrate so graphically that Control Banding has a value in all manner of workplaces and that one version cannot suit everyone. The approach needs to be adapted to suit the environment in which it is being used, but it is important that the fundamental principles of the guidance are consistent. It was realised that the ILO Toolkit, which had been in draft form until the workshop, with editorial changes being suggested, was already being used successfully as guidance. The ILO used the workshop as a forum to announce that

the Toolkit needed further improvements and possible expansion before becoming an ILO guidance document.¹

A strategic planning meeting was held during the workshop attended by representatives from the International Program for Chemical Safety (IPCS), WHO, ILO, IOHA, HSE, the US National Institute for Occupational Safety and Health (NIOSH), the German chemical industry association (VCI), the German Federal Institute for Occupational Safety and Health (BAuA) and the University of Liege, Belgium all of whom have a commitment to promoting the use of Control Banding. At this meeting it was agreed that the ILO and WHO under the auspices of IPCS, were the appropriate bodies to set up an informal technical group to take the concept forward. The group would need a secretariat and IPCS which is a cooperative venture of WHO, ILO and the United Nations Environment Programme (UNEP) was seen as the most appropriate body to provide this. Subsequent to the workshop this was formally agreed and the ILO and WHO formally launched the IPCS (WHO, ILO) Cooperation on Control in January 2003.

The organisations represented at the strategic planning meeting form the core members of the technical group, which is a dynamic informal group bringing in others as progress is made. The WHO collaborating centres will conduct trials and assess the applicability of the Toolkit and adapt it as necessary to their needs. The developments that different countries and organisations need and/or make will be reported to the technical group so that all may share from the developments. The Toolkit will undergo continuous development and improvement but the technical group will ensure that the integrity of the system is maintained, and that lessons learned are shared. This recognises the fact that many activities will have their own life and they will not be constrained while ensuring that the technical aspects of hazard classification, exposure estimation and control options upon which the system depends are correctly maintained and updated. The application of the Control Banding approach will be much affected by changing national legislation and implementation of the Globally Harmonized System for Classification and Labelling (GHS), which provides for assignment of the Risk Phrases on which Control Banding relies.

The Toolkit therefore must be developed into a Control Banding Programme, rather than a one off publication. The Toolkit publication forms the basis upon which the programme will develop internationally. Implementation is the key to the success of the programme and for this the long term commitment of industry, regulatory authorities and the international organisations is required. It is probable that there are two product types required. One for the small business in the more developed economies, where access to internet and specialist advice is relatively easy, and another for the developing countries where the holistic approach used by the GTZ in Indonesia may be more appropriate. The suppliers of chemicals must be engaged. Since Control Banding relies on the information that suppliers provide, tools that enable suppliers to get the necessary information to the users is needed. It is likely that a number of tools, in combination, would be needed. Implementation of the GHS would provide for products sold, to be labelled with their Risk Phrases, however this would not address all situations, for example where chemicals are manufactured in the workplace. Material Safety Data Sheets (MSDS) are also an important information source. However, MSDS may not be readily available in all workplaces (depending on local laws), and while they may include toxicology and other hazard information, they may not contain the Risk Phrases needed for Control Banding. IPCS International Chemical Safety Cards (ICSCs) are available for some 1300 chemicals in English, with some available in up to 26 languages. They have significant international uptake and are readily available. Consideration will be given to including the information required to enable application of Control Banding in the IPCS ICSCs.

It was noted that another international organisation that would have an interest in this programme is the International Association of Labour Inspection since at least in countries where there is enforcement, the approach assists the inspectors. This is a large organisation with many

¹ The integration of the GHS classification and labeling criteria and the IPCS International Chemical Safety Cards (ICSCs) in the Toolkit was of particular importance.

countries represented and their support would assist the acceptance of the approach in business and at regulatory authority level.

Much work has been done to get to this point and the creation of an international programme to promote the use of the Control Banding approach to reduction of ill health caused by exposure to chemicals is a tremendous outcome of the workshop. The technical group has set 2005 as the target date for a formal launch of the programme. 2005 fits with the time range of the current global work plan for the WHO collaborating centres. The next two years therefore must see as much testing and development of the systems as is possible, to identify and develop the products that can be used around the world to prevent ill health caused by chemicals at work.

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