

IUPAC Committee on Chemistry and Industry (COCI)
Preliminary Meeting on Safety
Sundsvall, Sweden
7 June 2002

Present:

Nelson Wright, Chairman	12539 Rue Ranger, Montreal, PQ, Canada
Mark C. Cesa, Secretary	BP Chemicals Inc., USA
Paul De Bievre	President, National Committee on Chemistry, Belgium
H.-Luzius Senti	Chatel Dessous, CH-1271 Givrins, Switzerland
Jinliang Qiao	Research Institute of Chemical Industry, SINOPEC, China
Min-Che Chon	President, Chon International Co., Ltd, Korea/Seoul
Aldo Bologna Alles (Obs.)	Lactosan-McCormick, Uruguay
Akira Ishitani	Kanagawa Academy of Science and Technology, Japan
Esma Toprak (Observer)	Chemical Engineering Department, Bogazici University, Turkey
Michael D. Booth	Chemical and Allied Industries' Association, South Africa
Mikhail V. Gorelik	NIOPIK, Russia
Alan Smith	Hydowns Farm, Woodlands, Wimborne, Dorset, UK
Jonas Unger	Ungernet AB, Sweden

Visitors:

Kevin Connelly	Global SHE Operations, Astra Zeneca, Sweden
Lars Ivar Eldring	Swedish National Committee for Chemistry
Alexandre Pokrovsky	Division of Basic and Engineering Sciences, UNESCO

AstraZeneca Perspectives on Industrial Safety (Connelly)

Dr. Connelly gave a PowerPoint presentation titled, "HSE and Risk Management." Copies of the presentation will be made available separately. The presentation included a review of AstraZeneca operations. The company focuses on seven major therapy areas, and has 54,000 employees worldwide with research facilities in the US, UK, Canada, China, and in Mondal, Sweden. Production facilities are located in the US, Sweden, UK, India, South America, South Africa, and Puerto Rico.

The timeline for development of a new medicine was reviewed as the starting point for explaining the importance of safety, health, and environmental (SHE) excellence in the company. It typically takes up to 10 years to develop a new pharmaceutical to commercialization. The process includes drug discovery, development and testing, etc. Astra-Zeneca incorporates predictive technology and discovery of new natural products (in a laboratory in Queensland, Australia) in its portfolio of technologies. Their approach encompasses understanding disease pathways to aid in designing new therapeutic molecules, and includes combinatorial methods for synthesis and screening of thousands of candidate compounds.

Dr. Connelly then moved to a discussion of AstraZeneca's approach to risk management. Potential hazards are evaluated on the basis of likelihood, consequences, and risk. Drivers for consideration of hazards are legislative, ethical, and economic. For example, if a pharmaceutical producer loses access to a raw material, it will lose business because the unreliability of production of the drug will force doctors to stop prescribing it, at a cost of millions of dollars. Risk management is a combination of risk assessment, provision of controls, and management of controls.

AstraZeneca manages SHE globally and implements locally. It is a signatory to Responsible Care in the US, UK, and Sweden with local implementation at its facilities. However, it has not implemented ISO 14000 because it is focused only on environmental matters, in opposition to AstraZeneca's focus on SHE as a whole. HAZOP, What-if sessions, and specialist assessment are examples of SHE tools used. Risk assessments are updated as processes, equipment, etc. change. The basis for SHE at AstraZeneca, built on risk management tools, is hierarchical, built from site/building/unit-office/process-activity-equipment. SHE processes are built into process development, including candidate drug nomination, synthesis freeze, process freeze, and technology transfer to manufacturing, and incorporates a rational tolerance for risk.

Safety Training Program (Cesa)

Status

A PowerPoint presentation was made, copies of which will be available separately. Four Safety Training Program Fellows are slated for training in 2002 at Sasol in South Africa, BP Chemicals in the US (2 trainees), and Sankyo in Japan. Several other candidates will be scheduled for training in 2003. Dr. Alles will work to identify Latin American trainee candidates.

Improvement Suggestions

Discussion after reviewing the status of the Safety Training Program focused on areas for potential improvement of procedures in the program and ways to increase the global reach for trainee candidates and Host Companies.

Recruitment, Screening and Selection of Trainees

The procedures for recruiting, screening and selecting trainees were reviewed. A concern was expressed on the ability to vet candidates properly, particularly with respect to checking candidates' backgrounds. The suggestion was made to ask IUPAC for further guidance via the National Adhering Organizations (NAO's).

Recruitment and Retention of Host Companies

Additional Host Companies are needed in Western Europe and North America. AstraZeneca provisionally agreed to consider hosting for 2002 and beyond.

Program Publicity

The Safety Training Program web pages are in need of updating. Dr. Cesa will provide updates to the site, including the downloadable program brochures and application forms.

Funding Options

Discussion of funding needs included possible sources for funding to support trainee travel and Host Company expenses. Dr. Pokrovsky pledged a commitment from UNESCO for funding for trainee travel expenses for 2002, 2003, and 2004. COCI can continue to support other expenses on a short-term basis.

Symposium at Ottawa IUPAC Congress

A symposium in the form of a poster session to describe trainee experiences and initiatives will be held at the IUPAC General Assembly and Congress in Ottawa in 2003. Further information is in the Sundsvall COCI meeting minutes.

Safety Workshops

Status and Plans

Dr. Booth reported on the Senegal workshop, which was held as part of the All Africa Pure and Applied Chemistry annual meeting in 2001. COCI members are referred to Dr. Booth's article in *Chemistry International* (CI.) For the Senegal workshop, the ACS paid travel expenses, and UNESCO paid living expenses for attendees. Dr. Booth suggested that this experience can be used as a model for funding in the future, depending on local customs and conditions.

China

SINOPEC will organize and fund a Safety Workshop in China on a petrochemical theme. One speaker has been identified so far (Harry Heo from BP in Korea). Drs. Booth and Qiao, the organizers of the China workshop, are asking for 4 to 5 other speakers. Drs. Cesa and Wright agreed to contact American Chemical Society (ACS) colleagues, and Dr. Smith will contact the Royal Society of Chemistry (RSC) for candidate speakers. Mr. Unger will identify a candidate speaker from Sweden. Dr. Pokrovsky commented that a one-day meeting, the plan for the Chinese workshop, might be too short. UNESCO will provide \$5000 for local expenses for attendees at China workshop. Workshop organizers will coordinate with Dr. Pokrovsky for funding timing and amounts.

Turkey

Esma Toprak reported on the status of planning for the Safety Workshop in Turkey. Original plans called for completion of this workshop by the end of 2002 in order to secure UNESCO funding. "Social Contributions of Chemistry – Safety and Toxicology" was suggested as topic for workshop. There was discussion on rescheduling this workshop for 2003. A decision was to be reached at the COCI meeting the following day.

Other

Dr. Pokrovsky is proposing a workshop for Africa for 2004. He suggested toxicology as a theme for a future workshop, and mentioned that UNESCO can supply a CD-ROM with toxicology materials for free.

Any New Items

None were discussed.