Safety Training Fellows Visit Japan, South Africa, and USA in 2002 and 2003

by Mark C. Cesa

The IUPAC Committee on Chemistry and Industry (COCI) has a strong focus on safety in chemical operations. Through its Safety Workshops (see CI Vol. 25, Jul-Aug 2003, p. 32) and the IUPAC-UNESCO-UNIDO Safety Training Program, COCI disseminates state-of-the-art practices in health, safety, and environmental quality worldwide.

The Safety Training Program allows safety experts from developing countries to learn about safety and environmental protection measures by visiting and working in the plants of IUPAC Company Associates in the industrialized world. IUPAC, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the United Nations International Development Organization (UNIDO), established the program in 1993 to promote interactions between developed countries and the developing world to disseminate state-of-the-art knowledge on safety and environmental protection in chemical production.

The Safety Training Program covers the following topics:
- process safety management
- environmental protection
- HAZOP/HAZAN analysis
- legislative measures and interaction among industry, universities, government, and the public
- emergency planning and model studies
- “responsible care” and its relevance to developing countries
- integrated approach for safety, health, environment (SHE) at unit and company levels, and training of university teaching staff in SHE
- ISO 9000 and 14000 series
- material safety data sheets (MSDS)

Since COCI reactivated the program in 1999, this important initiative has grown considerably. Five international Fellows have received training at IUPAC Company Associates in the USA, Japan, and South Africa. The training of two Fellows in 2000 was the subject of a recent article in CI (Vol. 23, Mar-Apr 2001, p. 33).

In 2002, COCI sponsored three Fellows for hands-on training in health, safety and environmental practices at IUPAC Company Associates Sankyo Co., Ltd. in Japan, Sasol in South Africa, and BP Chemicals, Inc. in the USA:
- Kelvin Khisa, deputy director of the UNIDO/UNEP/UNDP sponsored Kenya National Cleaner Production Centre in Nairobi
- Tersoo Charles Gwaza, HSE trainer at Shell Petrochemical Development Company in Nigeria
- Zhang GuoHong, senior engineer, Security and Environment Protection Bureau of Sinopec in Beijing

Kelvin Khisa’s training was hosted by Dr. Shinroku Iwamatsu, vice director, Manufacturing Division of Sankyo Co., Ltd. During Khisa’s very busy two weeks, he visited Sankyo research laboratories and production facilities at Tanash, Odawara, Onahama, and Hiratsuka, Japan. In addition, he visited facilities of the Shimizu Corporation, Tokyo Eco, Fuji Film, the Central Bank Water Outside Landfill Site, and the New Sea Area Land Reclamation Site in Tokyo, the Japanese National Institute of Industrial Safety, Tokyo metropolitan government offices, and the Chemical Society of Japan. Khisa plans to hold workshops for industrialists in several Kenyan cities, to train safety auditors and carry out safety audits, to set up occupational health and safety demonstration projects for industry and universities, and to work with relevant government ministries to propose and implement realistic occupational health and safety policies.

Tersoo Charles Gwaza’s visit to Sasol Research and Development in Sasolburg, Secunda, and Johannesburg, South Africa, in June 2002 involved learning about the company’s occupational hygiene, process safety management, hazard identification risk assessment, and accident investigation techniques.
He stated, "(This) training is a worthwhile investment and has sensitized me to a greater commitment to safety and environmental issues, an exposure that has left (the) impression . . . that it is possible to have an indigenous company in the developing world operate with . . . best practices." Gwaza has shared his learnings with Shell Nigeria staff and contractors, and plans to join the Shell Nigeria accident investigation team. He also will work with the state government of Benue, Nigeria, on safety and environmental issues.

Zhang GuoHong visited BP Chemical’s corporate headquarters in Naperville, Illinois, and a chemicals production site and refinery in Lima, Ohio, in September 2002. His hosts, Geoffrey Gilman and Michael Markowicz, both health, safety, and environmental professionals at BP, provided intensive instruction in company-wide safety issues, laboratory SHE practices, and compliance with governmental regulations. Mr. Kevin Sprague provided guidance on SHE activities at a chemical production site. Since his return to China, Zhang has written prolifically in Chinese chemical safety magazines about what he learned at BP.

Five potential Fellows have received invitations for training during 2003, and applications are now invited for placement in the Safety Training Program for 2004. Each scientist or engineer accepted into the program is assigned to an IUPAC Company Associate in an industrialized country. The period of training is typically one to three weeks. Accommodation, meals, and travel expenses are provided for all trainees.

Candidates successfully completing the program submit a detailed report to the director of the program and the host company. Trainees receive a certificate confirming their participation in the program. Successful candidates will be professional scientists and engineers who are currently:

• involved at a supervisory or managerial level in chemical companies, government institutions, or scientific institutions
• engaged in aspects of safety and environmental protection in chemical, pharmaceutical, or biotechnological production or in the teaching of these fields
• able to influence safety practices in their places of employment and elsewhere within their home country

Application forms and further information on the Safety Training Program can be obtained at <www.iupac.org/projects/1993/022_11_93.html> or from the COCI secretary:

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