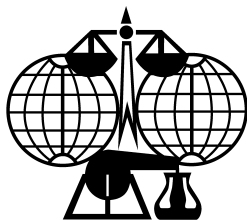


IUPAC-UNESCO-UNIDO
Safety Training Program

Poster presented at the
IUPAC Congress/General Assembly
August 2003

Purposes of the Safety Training Program

- Reinforce concept of **corporate responsibility and accountability** in the industrially developing world
- **Narrow gaps** between developed and developing countries in safety education, research, and implementation of technical measures
- Promote interactions to **disseminate state-of-the-art knowledge** on safety and environmental protection in chemical production
- Allow experts from developing countries to learn about safety and environmental protective measures by **visiting and working in plants of IUPAC Company Associates** in the industrialized world



IUPAC - UNESCO - UNIDO Cooperation

Joint Safety Training Program Responsibilities:

IUPAC Committee on Chemistry and Industry (COCI)

Recruiting and approving trainees
Matching trainees and host Companies

United Nations Educational, Scientific, and Cultural Organization (UNESCO)

Financial support for travel and for in-country programs after training
Trainee recruiting and placement

United Nations Industrial Development Organization (UNIDO)

Recruiting trainees
Trainee placement within UNIDO facilities

Host Companies

Trainees' local expenses
Development of course of study; training

Topics Covered in Training Program

- Process Safety Management (PSM)
- Environmental Protection
- HAZOP/HAZAN Analysis
- Legislative Measures and Interactions 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, and Environment (SHE) at Unit and Company Levels
- Training of University Teaching Staff in SHE
- ISO 9000 and 14000 Series
- Material Safety Data Sheets (MSDS)

Criteria for Selection of Trainees

Professional scientists and engineers who are currently:

- Involved at a **supervisory or managerial level** in chemical companies, governmental or scientific institutions, or universities
- Engaged in **aspects of safety and environmental protection** in chemical, pharmaceutical, or biotechnological production or in the teaching of these fields
- **Influential** in the safety practices in their places of employment and elsewhere within their home country

Responsibility of Trainees

- Utilize learning within their place of employment
- Disseminate knowledge gained in the program throughout home country
- Establish new programs to improve safety practices within home country
- File report with IUPAC, UNESCO, and UNIDO
 - Evaluation of training - host company, content of program, usefulness
 - Activities to be undertaken to apply training after return home

Trainees in 2000



Ms. Esma Toprak - Director of Chemical Engineering Laboratories, Bogazici University, Istanbul, Turkey
Trained at BP Amoco Chemicals Research Laboratory and Petrochemical Plant, Chicago, IL and Green Lake, TX
Focus of Training - Laboratory Safety and Waste Treatment
Applications of Training - Teaching laboratory safety procedures, seminars for industrial and academic facilities in Turkey

Prof. Ali A. El-Emam - Dean of Faculty of Pharmacy, University of Mansoura, Egypt
Trained at Bristol-Myers Squibb Corp. Laboratories and Production Facilities in New Jersey, USA
Focus of Training - Safe handling of laboratory chemicals, medical surveillance of employees, crisis management
Applications of Training - Establishment of nationwide safety programs via Egyptian Ministry of Environmental Affairs (with UNESCO funding)



Trainees in 2002



Mr. Tersoo Charles Gwaza,
Shell Petrochemical
Development Company,
Nigeria
*Trained at Sasol, South
Africa*
Focus of Training - Process
Safety Management
Applications - Staff training;
accident investigations; other
industrial sites in Nigeria



Mr. Kelvin Khisa,
UNIDO National Cleaner
Production Centre, Kenya
Trained at Sankyo, Japan
Focus of Training -
Occupational Health and
Safety
Applications - Occupational
health and safety workshops;
training for trainers; modern-
ization of safety practices in
industry and universities



Mr. Zhang GuoHong,
Sinopec, China
*Trained at BP
Chemicals, USA*
Applications of Training
- Numerous magazine
articles on industrial
safety

Benefits to Host Companies

- Information exchange between trainee and employees
- Interactions beyond safety training - select trainee with similar research interests or potential for future collaboration
- Publicity - demonstrate leadership in health, safety, and environment
 - Shareholders
 - Public relations
 - Internal - increasing employee awareness and commitment to safety
 - Publications in news media, Internet, company publications

Host Companies: BP Chemicals (USA), Bristol-Myers Squibb (USA), Sasol (South Africa), Sankyo (Japan)

References

General Information about the Safety Training Program:

http://www.iupac.org/projects/1993/011_11_93.html

Experience of Recent Trainees:

http://www.iupac.org/publications/ci/2001/march/news_safety.html

Chem. Int., **2001**, 23(2), 33-34.

Application Materials:

<http://www.iupac.org/standing/coci/safety-program.html>

Contact

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