IUPAC-UNESCO-UNIDO
Safety Training Program Workshop
IUPAC General Assembly and Congress
Beijing, China
17 August 2005

Support is gratefully acknowledged:
IUPAC
UNESCO and UNIDO
BP (USA)
Bristol-Myers Squibb (USA)
Sasol (South Africa)
Sankyo (Japan)
Mitsui Chemicals (Japan)
10:00  Introductory Remarks
Dr. David A. Evans, Chairman, IUPAC Committee on Chemistry and Industry

10:15  The IUPAC-UNESCO-UNIDO Safety Training Program
Dr. Mark C. Cesa, Coordinator, Safety Training Program

10:30  The Need for Training in the Development of Health, Safety and Environment Management System in China
Shanjuin Mu, Deputy Director, SINOPEC Research Institute of Safety Engineering; Deputy Director, National Registration Center for Chemicals, NRCC

11:00  The Major Challenges Facing the Proper Application of Chemical Safety Regulations in the Third World Countries
Ali A. El-Emam, Department of Medicinal Chemistry, University of Mansoura, Egypt

11:30  Dissemination of Safety Concepts Through Education
Esma Toprak, Department of Chemical Engineering, Bogazici University, Istanbul, Turkey

12:00  Lunch

13:00  Material Safety Data Sheets (MSDS) – A Hazard Communication Tool that is Largely Ignored in Kenya
Kelvin Khisa, UNIDO National Cleaner Production Centre, Nairobi, Kenya

13:30  The Status of Occupational Health and Safety in Kenya
Jane Nyakang’o, UNIDO National Cleaner Production Centre, Nairobi, Kenya

14:00  Pharmaceutical and Chemical Waste Management in Uruguay
Ana Luisa Arocena, Montevideo, Uruguay

14:30  Break

14:45  Challenges/Applications of Safety & Environmental Best Practices: IUPAC-UNESCO-UNIDO Fellowship Feedback
Tersoo Charles Gwaza, Shell Petrochemical Development Company, Port Harcourt, Nigeria

15:15  IUPAC-UNESCO-UNIDO Environmental Safety and Management Training: The Impact on Research Institutes in Nigeria
Isiaka O. Bakare, Rubber Research Institute of Nigeria, Benin City, Nigeria

15:45  How to Improve HSE Management Benchmark Level in China
Zhang Guo-Hong, Unilever China

16:15  The IUPAC-UNESCO-UNIDO Safety Training Program – Opportunities for Expansion and Enhancement
Alexandre Pokrovsky, IOCD Representative to IUPAC, First Vice-President of the International Foundation for Science Education (IFSE)

16:30  Panel Discussion
The IUPAC-UNESCO-UNIDO Safety Training Program – Successes and Opportunities for Improvement

17:00  Adjourn
Purpose of the Safety Training Program

*IUPAC will assist chemistry-related industry in its contribution to sustainable development, wealth creation, and improvement of the quality of life.*

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.

Narrow gaps between developed and developing countries.

Promote interactions to disseminate state-of-the-art knowledge on safety and environmental protection.
Topics Covered in Training Program

Process Safety Management (PSM)
Environmental Protection
HAZOP/HAZAN Analysis
Legislative Measures and Interactions Between 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.
Responsibilities of Trainees

Utilize learnings 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
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), Mitsui Chemical Co. (Japan) AstraZeneca (UK, 2005)
Trainees

**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

**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
Trainees

**Mr. Tersoo Charles Gwaza** - Shell Petrochemical Development Company, Port Harcourt, Nigeria
Trained at Sasol, South Africa

**Mr. Kelvin Khisa** - UNIDO National Cleaner Production Centre, Nairobi, Kenya
Trained at Sankyo, Japan
Trainees

**Mr. Tersoo Charles Gwaza** - Shell Petrochemical Development Company, Port Harcourt, Nigeria
Trained at Sasol, South Africa

**Mr. Kelvin Khisa** - UNIDO National Cleaner Production Centre, Nairobi, Kenya
Trained at Sankyo, Japan
Trainees

Mr. Zhang GuoHong, Unilever, China
Trained at BP Chemicals, USA

Mr. Isiaka O. Bakare Dare, Rubber Research Institute of Nigeria, Benin City, Nigeria
Trained at Mitsui Chemical Co., Japan
Trainees

Ms. Jane Nyakang’o, UNIDO National Cleaner Production Centre, Nairobi, Kenya

Ms. Ana Luisa Arocena, Waste Management Expert, Montevideo, Uruguay

Trained at BP Chemicals facilities in Naperville, IL USA and Lima, OH USA
For Further Information:


General Information
Program Brochures
Application Forms
Links to Trainee Reports
Links to Published Articles on the Program
Acknowledgments

Nelson Wright
David Evans
Alexandre Pokrovsky
Mike Booth
Paul De Bievre
Aldo Bologna Alles
Akira Ishitani
Jonas Unger

Host Companies
BP Chemicals, Inc.
Bristol-Myers Squibb Co.
Sasol
Sankyo Co., Ltd.
Mitsui Chemical Co.

Financial Support for Workshop:
UNESCO
IUPAC