

-REPORT-

**IUPAC-UNESCO-UNIDO Safety Training Program, BP Chemicals-
Ohio and Lima, USA**

6 -17th October 2003

Prepared for the IUPAC Committee on Chemistry and Industry



Participant:

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1.0 INTRODUCTION

The environment and safety training was organized by BP Chemicals Inc., an IUPAC Company Associate in the United States of America, within the framework of the IUPAC-UNESCO-UNIDO Safety Training Program. The purpose of the program is to provide opportunities for safety experts from around the world to learn about safety and environment protection measures by visiting and working with their counterparts at IUPAC Company Associate facilities. The beneficiaries are expected to use the training in their home countries to improve health and safety. The session took place in BP Chemicals in Naperville-Ohio and Lima-Illinois.

2.0 DESIGN OF THE TRAINING COURSE

This course lasted for 12 days, from 6th October, to 17th October. The programme included lectures, discussions, demonstrations, practical exercise and visits to waste disposal plants; 2 Onyx Processing Plants in Port Washington and Menomonee Falls-Wisconsin, and Envirosafe Landfill Site in Lima. The other visit was to Shawnee Township Fire Department, Lima Ohio.

The course was co-ordinated by Dr. Mark Cesa, Secretary of the IUPAC Committee on Chemistry and Industry (COCI). Dr. Cesa also introduced the course together with Dr. Geff Gilman both from the Nitriles Process Unit. The entire 42 lectures on safety, environment and health were given by experts from different production units of BP Chemicals including Premcor Oil Refinery and Akzo Nobel.

A large amount of reference materials were made available to us the participants and we also had the opportunity to see for ourselves ongoing operations during the visits to the process units and waste disposal sites. During the lectures, emphasis was put on management of change from a design point of view and behavioural change as cornerstones of environment, health and safety. The practical exercise consisted in undertaking an Advanced Safety Audit in Lima plant that entails having a conversation with people at work and encouraging right behaviors.

3.0 EVALUATION OF THE COURSE

This was done in roundtable debriefing sessions. In Naperville this was done with Mark Cesa, Alice Boomhower and Mike Markowicz. In Lima, it was done with Kevin Sprague. All comments made at the round-table were positive and encouraging. I enjoyed the lectures, reference materials, practical exercises and the visits to the waste disposal plants. The excellent organizational skills, co-ordination arrangements and team work among the BP staff left me convinced that great effort had gone into planning this course. I'm truly grateful for the program designers both in Naperville and Lima.

The course has provided me with skills to enable me design safety programs and environment systems for enterprises in Kenya. I'm convinced that this training course, together with the extensive professional contacts made, has added a valuable asset in the Centre's capability statement.

Suggestion: COCI should consider awarding certificates to participants. If this request is not too late, the organizers could consider giving us one!

4. HOW I SHALL MAKE USE OF THE TRAINING IN KENYA

Kenya National Cleaner Production Centre:

- Training the Centre staff to deliver HSE programs to enterprises
- Utilizing the reference materials to design localized HSE training manuals and checklists
- Forming of an HSE team at the Centre

Enterprise Level:

- Setting up HSE programs in industry
- Setting up HSE teams from various departments in industry
- Setting up laboratory safety programs for companies with labs
- Getting into the root cause of environment, safety and health issues in industry during audits
- Training industry employees to be responsible for HSE
- Material Safety Data Sheets for chemicals used by industries
- Personal protective equipment for industry workers
- Safety and Environment Audits
- Emergency preparedness including fire drills, chemical spills etc
- Hazardous waste management in the Kenyan context
- Employee health programs

5.0 EXTRA –CURRICULAR ACTIVITIES

Besides the hard training, we were exposed to all the exotic foods of Illinois and Ohio. Several staff from the Naperville and Lima complex offered to take us for a sampling spree of the dishes in the area in addition to a home dinner! Other staff could come really early to either collect us or drop us off at the hotel. The Christian fellowship, visit to the museum and the astronaut evening talk all spiced up the otherwise airtight program. Many thanks to them all.

SCOPE OF TRAINING PROGRAMME

IUPAC-UNESCO-UNIDO safety training program

International Union of Pure and Applied Chemistry (IUPAC), United Nations Educational, Scientific, and Cultural Organization (UNESCO), United Nations Industrial Development Organization (UNIDO)

1 TRAINING AT BP CHEMICALS, NAPERVILLE- ILLINOIS, 6-10TH OCTOBER

1.1 HSE Training Team

Mark Cesa	-	Co-ordinator and Senior Research Associate, Nitrile Process Chemistry
Geoffrey Gilman	-	Health Safety and Environment Specialist
Alice Boomhower	-	Environmental, Nitriles Business Unit
Tom Senn	-	Engineering Authority
Grace Chiang	-	Industrial Hygienist
Greg Crum	-	Coordinator, Technical & Safety Services
James Saylor	-	Environment Coordinator
George Tacquard	-	Business Unit Leader, Nitriles
Mel Luetkens	-	Nitriles HSE Program
Jay Kouba	-	Vice-President, Chemical Technology
Michael Markowicz	-	CIH, CSP, P.E
Eric Moore	-	Research Associate, Nitriles Chemistry Research
James Jernigan	-	Director, Product Stewardship & Toxicology
Jay Couch	-	Research Scientist, Nitriles Catalysis Research
Bruce Rosen	-	Research Associate, Process Chemistry and Engineering
Joseph Bartek	-	Research Scientist, Nitriles Catalysis Unit
Stephen Jevne	-	Research Scientist, Nitrile Catalysis Research
Cynthia Manfredi	-	Medical Director
Jason Strayer	-	Process Engineer, Nitriles Unit
John Frey	-	Health, Safety and Environment
Richard Symuleski	-	Manager, Crisis Management
Frank Baker	-	Health, Safety and Environment
Mel Luetkens	-	Business Technology Manager, Nitriles Business Unit

Topics covered:

- Site Industrial Hygiene Programs
- Site Environmental Programs
- Nitriles HSE Program
- BP Technology
- Employee Medical Programs
- Product Stewardship & Toxicology
- Engineering Authority
- Site Safety Council
- Process Safety Review
- Pilot Plant Operations and HSE
- Nitriles Health & Safety Programs
- Nitriles Environmental Programs
- Root Cause Analysis
- Laboratory Safety
- Emergency Response/Site Safety Programs
- Crisis Management
- Horizon Interview

1.2 Visit to Onyx Recycling Facility and Processing Plant

Expert Team: James Saylor & Jeff Gilman (BP-Chemicals)
Kevin Shaver & Joseph Bauman (Onyx)

2 TRAINING AT BP CHEMICALS, LIMA-OHIO 13-17TH OCTOBER, 2003

2.1 Health, Safety, Security and Environment Expert Team

- Kevin Sprague - HSE Manager
- Charles Treloar - Plant Manager
- Nick Steimle - MSc. Student
- Todd Flippin - Intern
- Jim Cook - HSE
- Jan Kentner - HSE Team member
- Shawn Spainhower - Health, Safety and Environment
- David Breitigam - Senior Industrial Hygienist
- Linda Schumacher - Health Safety Services Coordinator
- James Martz - Coordinator, Technical & Safety Services
- Kellie Johnston - Health, Safety and Environment
- Dr Oyer - Medical doctor
- Bob Schantz - Health, Safety and Environment
- Dave Linderud - Health, Safety and Environment
- Tom Say - Health, Safety and Environment
- Joseph Bianco - Environmental Specialist
- Brent Pace - Health, Safety and Environment
- Nanette Smith - Environmental Specialist
- Pam Wafzig - Health, Safety and Environment
- Brent Pace - Health, Safety and Environment
- Joseph Martz - Manager, Health, Safety and Environment Quality/Safety
- Sally Duval - Health, Safety and Environment
- Melinda Wright - Health, Safety and Environment
- Robert Maloney - HSE Technical Specialist
- Paul Wachtendorf - Health, Safety and Environment

Topics:

- HSSE Leadership
- Employee involvement in HSSE
- Peer Assisted Workplace Safety (PAWS)
- Management visibility
- Contractor Safety and Responsibilities
- Lima Safety Programs, Traction and areas of responsibilities
- Lima Industrial Hygiene Programs and areas of responsibilities
- Lima Medical Programs and areas of responsibilities
- Lab safety and safe sample collection issues
- PSM and the Lima Process Safety Committee
- NPDES sampling and visit outfall & ponds.
- Getting HSE right
- Waste, Deep wells and areas of responsibility
- Process Wastewater, Sanitary Wastewater, NPDES permit and areas of responsibility
- Air Programs, Permits, Relationships with Agencies and areas of responsibility
- Emergency Preparedness, ERT, Security and areas of responsibility, plus community aid tour to Shawnee Fire Dept and EMA offices, e.t.c.
- PET Team, CSI, Labor Relations, Discipline on HSE issues
- ISO, Responsible Care, RMP, and areas of responsibility
- Operations perspectives on HSE
- Transportation Safety

2.2 Premcor Oil Refinery Health and Safety Programs and Tour

Expert: Paul Logsdon – Environment Health and Safety Manager

Aspects covered: Resource Conservation Recovery
Wastewater Treatment Plant

2.3 Akzo Noble Health and Safety Programs and Tour

Expert: Jeff Wilson - Environmental Specialist

Topics: Resource Conservation Recovery
Wastewater Treatment Plant

2.4 Visit and tour to Envirosafe Hazardous Waste Disposal Facility

Experts: Nick Steimle (BP)
Lisa Humphrey (Envirosafe)

Topics: Waste Immobilization, treatment
Sanitary Land filling
Regulated wastes
Criteria for landfilling
Landfill design
Landfill operation
Landfill closure and post closure