

Evaluation of IAQ/IEQ

(Indoor Air Quality / Indoor Environmental Quality)

A 2-day practical workshop

presented by:

ALARA Industrial Hygiene Services Ltd.

In Downtown Toronto, Ontario

November 5 -6, 2015

COURSE OBJECTIVES

Indoor Air Quality problems are a major cause of lost productivity and discomfort in nonindustrial workplaces. Other problems such as lighting, noise, and workplace design may also contribute to discomfort and loss of productivity. A detailed evaluation of the indoor environment, using reliable methods, is an essential step in solving the problem. In addition to an understanding of air sampling strategies and skills in air sampling techniques, the investigator must also possess knowledge and skills in evaluating physical and biological hazards, and must be able to recognize ergonomic and psychosocial factors that may be contributing to the IEQ problem.

ALARA Industrial Hygiene Services has a strong commitment to occupational health education and training through practical courses such as this one. This course will provide participants with the skills and theoretical knowledge to enable them to conduct meaningful and effective IAQ/IEQ investigations. Participants will gain experience with monitoring instruments used in standard and advanced evaluations of the non-industrial environment. Emphasis will also be given to investigation protocols and interpreting data according to current guidelines and standards. The course has been designed for occupational hygienists and technologists, building engineers and managers who want to enhance their knowledge of indoor environmental monitoring and problem solving.

WORKSHOP PRESENTERS

Charles W. Pilger, CIH, ROH, C.Chem

Chuck has an MSc in organic chemistry (Waterloo) and an MEng in industrial hygiene (Toronto). He has taught graduate and undergraduate courses in occupational health and safety and environmental analysis, and now offers professional development workshops in occupational hygiene. He has directed two university occupational health and safety laboratories, and conducted research in occupational hygiene and environmental health.

Marguerite Pilger, CIH, ROH

Marg has a BSc in chemistry, a BA in psychology (Waterloo) and a Master of Engineering in industrial hygiene (Toronto). She consults full-time with ALARA, conducting field surveys and audits, and presenting occupational hygiene seminars and workshops.



COURSE PROGRAM

Day 1

- 8:30 Welcome and introductions**
- 8:45 Defining the Problem** - Sick Building Syndrome and Building Related Illness, IEQ concerns
- 9:45 Break**
- 10:00 Indoor Air contaminants and sources** - Carbon dioxide, temperature, humidity, volatile organic compounds and specific air contaminants: carbon monoxide, formaldehyde, asbestos, vehicle exhaust, microorganisms.
Other environmental factors - light, noise, ergonomics, psychosocial
- 11:00 Overview of HVAC** - Basic design of HVAC systems - components of standard ventilation systems and their effect on air quality.
- 12:00 Lunch break**
- 1:00 Preliminary IEQ Assessment Strategies** - Interviewing occupants, the preliminary walkthrough, inspecting the ventilation system and the use of questionnaires and symptom journals.
- 2:00 Measuring Air Quality** - Sampling and Measurement Considerations. Monitoring Methods and Equipment - selecting appropriate sampling equipment
- 3:00 Break**
- 3:15 Assessing the ventilation system**
Instruments for measuring air flow - practical exercises
Evaluating fresh air supply - practical exercise, tracer techniques
- 4:30 Adjournment**

Day 2

- 8:30 Measuring Air Quality II** - Calibration and use of sampling trains for integrated sampling and direct reading contaminant monitors. Conducting the survey: Practical exercise
- 9:45 Break**
- 10:00 Sample handling, storage and transport**
Techniques to ensure integrity of samples until they reach the laboratory
- 12:00 Lunch break**
- 1:00 Interpreting the collected data** - Air sampling calculations, standards and guidelines for air quality, health, and comfort
- 3:30 Communicating results** - the close-out meeting - the report and followup
- 4:15 Evaluation**
- 4:30 Adjournment**

REGISTRATION

By Email: Fill out the course registration form on the web site and submit a copy by email. Registration will be confirmed on receipt of payment of the course fee.

By Phone: Call **ALARA** at (416) 759-9579 to reserve a space, which will be confirmed upon receipt of payment.

Course Fee:

The course fee is \$904 including 13% H.S.T, payable by cheque or purchase order number. ALARA cannot accept payment via credit card for course fees.

The course will be held at:

The Downtown Holiday Inn
30 Carlton St., Toronto