



President's Message

Highlights in this Issue of OH Forum

Letter from the Editor 3

Health Physics..... 4

Noisy News..... 6

Sharing Ideas 7

On the Hygiene Front 7

F1 8

Spring Symposium Report..... 9

Hugh Nelson Award 10

Managing OHS&E.. 14

AIHCE 2007..... 15

This is my first President's Message since taking over the role four months ago, and I truly appreciate the opportunity to represent OHAO over the next year, and the experience of working with such a lively executive board. Our current Board consists of Past President Beth Walpac, President-Elect Jason Hoffman, our new Directors Michael Grey, Andrew Cutz and Susan Ng, our existing Directors Len Hong, Chuck Pilger and Monica Szabo, and our Secretary/Treasurer Otto Peter. (Congratulations to Otto, the recipient of this past year's Hugh Nelson Award of Excellence in Occupational Hygiene).

I would like to say thank you to Richard Quennville, our outgoing Past President, for all of his contributions to OHAO and the Board, having served two consecutive 3-year terms as President-Elect, President and Past President. Thank you also to Ray Ilson and Oliver Yeung, our two past Directors. Ray has also been very active on the Board over the past six years, having served two consecutive terms as director.

Remember that the Board is there to represent the OHAO membership, and we depend on you to help us identify what are up and coming issues, and how we should deal with them as an association. We certainly encourage you to get actively involved in OHAO!

What are some of the current issues and events our Board and committees are dealing with and that you can participate in?

- We need to look at some innovative ways to build or at least maintain our membership levels. What kinds of strategies would be effective in encouraging the enrollment of new members? What membership benefits are valuable to students, new professionals, or those of us who have been in the field for a while?
- We've acknowledged that most of us do not solely practice occupational hygiene in our jobs. Do our current educational programs prepare our professionals to meet the needs of today's organizations? How can we get timely education on a broad range of issues to help our professionals stay abreast of the changing OHS environment?
- The Program Committee and the Public Affairs & Education Committee are both in the midst of planning the Fall Symposium (Oct 17th) and PDCs, but they're always looking for suggestions on topics and speakers, and assistance with planning and coordinating the events.
- The American Industrial Hygiene Conference and Exposition (AIHce) will be in Toronto in 2009. We expect to begin some preliminary discussions with the AIHce conference organizers later in the year, and we anticipate that we'll be putting out the call for volunteers to help with local organization activities next year.

continued on page 3

OH FORUM

○ OHAO 2007-08 BOARD OF DIRECTORS

PRESIDENT: Margaret Fung, CIH
PRESIDENT ELECT: Jason Hoffman, MHSc, CIH
IMMEDIATE PAST PRESIDENT: Elizabeth A. Walpac, CIH, ROH
SECRETARY/TREASURER: Otto Peter, CIH

DIRECTORS: Andrew Cutz, BSc, CIH
 Michael G. Grey, CHP, ROH
 Len Hong
 Susan Ing, PEng, CIH
 Charles Pilger, CChem, CIH, ROH
 Monica Szabo, CRSP, ROH

○ EDITORIAL TEAM

EDITOR: Christine Sidhom, MSc (A), CIH
BOARD REPRESENTATIVE: Michael G. Grey, CHP, ROH
NEWSLETTER LAYOUT: Nikki Wright
COLUMN EDITORS: Alberto Behar, PEng, CIH
 Fiona Dalziel, CIH
 Jim Desormeaux, OHST, COHC
 Margaret Fung, CIH
 Michael Grey, CHP, ROH
 Ray Ilson, CIH, CRSP
 Brigitte Krajcar, CRSP, DOHS
 Lisa McMurray, MHSc
 Lorraine Shaw, CIH, ROH
 Christine Sidhom, MSc (A), CIH
 Carl Woychuk, ROH, CIH

○ OHAO COMMITTEE CHAIRS

Canadian Council of Occupational Hygiene:	Charles Pilger, CChem, CIH, ROH
Historical Task Force:	Margaret Fung, CIH
Hugh Nelson Award:	Monica Szabo, CRSP, ROH
Membership:	Don Shaw, CIH, ROH
Newsletter/Publications:	Christine Sidhom, MSc (A), CIH
Nominations:	Otto Peter, CIH
Program:	Jason Hoffman, MHSc, CIH
Public Affairs/Education:	Ray Ilson, CIH, CRSP
Webmaster:	Fletcher Wright Associates Inc.

○ ADVERTISING RATES

Cost:	Business Card	\$50.00*
	1/4 page	\$295.00*
	1/2 page	\$345.00*
	Full page	\$460.00*
	*plus GST #R127720134	

BONUS: Run your advertisement for 3 consecutive issues and save 33%

- 1/4 page Career advertisements (including jobs wanted) are published free of charge

OH Forum is published quarterly by the Occupational Hygiene Association of Ontario, and distributed free of charge to all members.

Deadlines for articles and advertising are as follows:

Issue	Deadline
February	10 th of January
May	10 th of April
August	10 th of July
November	10 th of October

Enquiries or suggestions should be directed to:

Editor - OH Forum c/o OHAO 6519-B Mississauga Road Mississauga, Ontario L5N 1A6	Tel: (905) 567-7196 Fax: (905) 567-7191 http://www.ohao.org
--	---

Circulation: 300

Vol 30, No. 1

The Occupational Hygiene Association of Ontario is an Ontario-based organization whose members are dedicated to the practice of occupational hygiene. Occupational hygiene is concerned with the protection of people's health from hazards arising in or from the workplace.

To develop and promote the profession of occupational hygiene, and to serve the interests of our members by:

- sponsoring professional development, training and research;
- promoting public and legal recognition;
- developing partnerships with stakeholders;
- providing public education;
- fostering communication and networking through publications and meetings.

President's Message... continued from page 1

- Much of the OHAO activities happen in the greater Toronto area, and we would like to see more regional meetings and events. We do need local members to coordinate these efforts, and are always on the lookout for volunteers interested in doing so.

Whether you're a new or a well seasoned member, I encourage you to volunteer some of your time and get actively involved with OHAO if you aren't already. Call or email a Board member or a Committee Chair to see how you can partici-

pate, or simply to offer comments, suggestions and ideas.

Margaret Fung, MHSc CIH
416 978 5943
margaret.fung@utoronto.ca



Editor's Message

What a great and interesting experience it has been to put together this newsletter - my first as an editor. I look forward to working with the column editors on many more.

In this issue, *OH Forum* contributors share articles on emergency response, heat stress monitors, working at heights, radiological protection of the environment, and a survey of the software Windows Vista.

Otto Peter also shared his acceptance speech for this year's Hugh Nelson Award of Excellence, and we also have a summary of this year's AIHce in Philadelphia and OHAO's Spring Symposium.

If anyone is interested in submitting articles and getting involved in the *OH Forum*, you may contact me at christine_sidhom@cbc.ca.

Enjoy the rest of your summer.

Regards,
Christine Sidhom, CIH

EDITORIAL TEAM

Fiona Dalziel, CIH
Alberto Behar, PEng, CIH
Jim Desormeaux, OHST, COHC
Margaret Fung, CIH
Michael Grey, CHP, ROH
Ray Ilson, CIH, CRSP
Brigitte Krajcar, CRSP, DOHS
Lisa McMurray, MHSc
Lorraine Shaw, CIH, ROH
Christine Sidhom, MSc (A), CIH
Carl Woychuk, ROH, CIH

Health Physics



—Column Editor—
Michael Grey, CHP, ROH
SAIC Canada

Radiological Protection of the Environment

The mandate of health physics has traditionally included protecting the environment from adverse effects caused by the use of radiation and radioactive materials. However, until recently, the International Commission on Radiological Protection (ICRP) and other international bodies did not believe that it was necessary to explicitly address the protection of non-human biota. The 1990 Recommendations of the ICRP stated that:

“The Commission believes that the standards of environmental control needed to protect man to the degree currently thought desirable will ensure that other species are not put at risk.”

Despite this, discussion of standards for the protection of non-human biota began in the mid-seventies and gained greater prominence following the Chernobyl accident in 1986. Regulators and the public also began to express a desire for standards for protection of non-human biota during the nineties. The ICRP summarized these developments in its 2007 Recommendations by stating that:

“The Commission is thus aware of the growing need for policy advice and guidance on such matters related to radiation

protection, even though such needs have not arisen from any new or specific concerns about the effects of radiation on the environment.”

A proposed system for the protection of non-human biota was developed during the course of a series of conferences, workshops and international collaborations sponsored by the International Atomic Energy Agency and other international bodies. This system forms the basis for the ICRP’s 2003 publication “A Framework for Assessing the Impact of Ionizing Radiation on Non-Human Species” (ICRP Publication 91). It also forms the basis for the ICRP’s more recent draft document on “The Concept and Use of Reference Animals and Plants for the Purposes of Environmental Protection”. In these documents the ICRP is proposing:

“...the development of a small set of Reference Animals and Plants, plus their relevant databases, for a few types of organisms that are typical of the major environments.”

The ICRP recognizes that these reference species “cannot reflect the full range of biological diversity or provide a general assessment of the effects of radiation on the environment as a whole”, however they do believe that “this approach could provide the basis for judgments about the probability and severity of the likely effects of radiation on such animals and plants, or other organisms that differ in specific characteristics from the reference types”.

The ICRP describes a Reference Animal or Plant as:

“a hypothetical entity, with the assumed basic biological characteristics of a particular type of animal or plant, as described to the generality of the taxonomic level of Family, with defined anatomical, physiological and life-history properties, that can be used for the purposes of relating exposure to radiation dose, and relating dose to different categories of effect, for that type of living organism.”

The Reference Animals and Plants should be:

- representative of typical flora or fauna in common ecosystems;
- exposed to radiation from a range of radionuclides in any given situation as a result of the nature of their surroundings, their lifecycle and their general biology and as a result of bioaccumulation;
- capable of being modeled using simple geometries so that their radiation exposure can be calculated; and
- there must be a reasonable amount of radiobiological information available about them, including data on probable radiation effects.

The ICRP has proposed a set of twelve Reference Animals and Plants (together with an example of that animal or plant that is found in Ontario) includes:

- Reference Deer (of the family Cervidae) – White-tailed Deer;
- Reference Rat (of the family Muridae) – Brown Rat;
- Reference Duck (a ‘dabbling’ duck of the family Anatidae) – Mallard Duck;
- Reference Frog (of the family Ranidae) – Bullfrog;
- Reference Trout (a freshwater trout of the family Salmonidae) – Rainbow Trout;
- Reference Flatfish (of the family Pleuronectidae) – marine environments only;

- Reference Bee (of the family Apidae) – Honeybee;
- Reference Crab (of the Cancrid super-family) – marine environments only;
- Reference Earthworm (of the family Lumbricidae) – Common Dew Worm (an introduced species);
- Reference Pine Tree (of the family Pinaceae) – Spruce & Cedar;
- Reference Wild Grass (of the family Graminaea) – Barley;
- Reference Brown Seaweed (intertidal seaweed of the class Phaeophyceae) – marine environments only.

The omission of a predatory animal or bird from the list of Reference Animals and Plants seems unusual, particularly since these species are often considered ‘Valued Ecosystem Components’ (VECs), but there is very little radiobiological data available for these species. There is a possibility that this omission may be addressed before the final document is published by the ICRP. There is also the possibility that national regulators may eventually decide to add additional Reference Animals and Plants to the ICRP’s recommended list, or make substitutions based on local considerations, before the recommendations are incorporated into national regulations.

The use of Reference Animals and Plants as the basis for radiation protection is consistent with the established use of a ‘Reference Man’ in the calculation of ‘Dose Conversion Factors’ for humans. The International Atomic Energy Agency has already used a similar approach to develop a set of ‘dose rate per unit concentration factors’ for 104 radionuclides in a marine environment. More recently, the US Department of Energy has developed a set of ‘radiological dose conversion factors’ and generalized

dose models to assess the ecological impact of radionuclides in air, soil and water.

In many of these approaches numerical models based on the anatomical, physiological and ecological characteristics of the Reference Animals and Plants are used to calculate the effective dose resulting to the organism due to exposure to a unit quantity of a radionuclide in the environment. These ‘Dose Conversion Factors’ are combined with measured radionuclide concentrations to determine the effective dose to the organism which is then compared to some established limit or guideline value.

The ICRP is suggesting a different approach; the Reference Animals and Plants would be used as the basis for calculating ‘Derived Consideration Levels’ for radionuclides in environmental media. These values could be used as a basis for interpreting the results of environmental monitoring programs. However, the ICRP’s proposal to express the Derived Concentration Levels in terms of multiples of natural background radiation dose rates has proved to be controversial and it may be modified before the final document is released.

Upcoming Fall Symposium

The OHAO program committee has set the next symposium for October 17, 2007 at Black Creek Pioneer Village. We believe that it will be a great line-up of topics including:

- *Legionellosis Associated with Building Water Systems,*
- *Nanoparticles Measurements and Controls,*
- *MOL Updates,*
- *Control Banding,*
- *The new Canadian Chemical Management Plan, and*
- *The future of Occupational Hygienists – the most valued profession?*

Please mark it in your calendar and plan to join us!

Noisy News



—Column Editor—
Alberto Behar, PEng, CIH
Adjoin Professor,
University of Toronto

For those of us who have been expecting some changes in the over-twenty-years-old noise legislation, it was a pleasant surprise to finally see something happen. In the latest Gazette, it states that the old Sect. 41 of the Occupational Health and Safety Act (R.R.O. 1990, Regulation 855, amended to O. Reg. 565/06) has been changed!

First the good news: The new regulation requires employers to implement all measures reasonably necessary in the circumstances to protect workers from exposure to hazardous sound levels. It further requires that employers ensure that no worker is exposed to more than 85 dBA $L_{ex,8}$.

$L_{ex,8}$ is the average sound level using the 3 dB exchange rate normalised to an 8 hour shift. Thus this average would be limited to 85 dBA for an 8 hour shift and 83 dBA for a 12 hour shift (see table below). This brings Ontario into line with most other Canadian (and international) jurisdictions and with NIOSH and ACGIH. Of course, many of us (including CSA Z107.56) have been using this approach for years. Indeed, it was first proposed for use in Ontario in a 1978 draft noise regulation. Still, it is good to see its somewhat belated appearance as an Ontario law.

Shift Length per day	Average Sound Level over Shift (L_{eq})
8 hours	85 dBA
12 hours	83 dBA

The new regulation also makes clear that **hearing protection is to be a last resort** if noise controls cannot achieve this limit and any comparison with the 85 dBA limit to determine the need for controls is to be made discounting the effect of any hearing protection.

Originally, the Ministry proposed the use of an impulse noise limit. OHAO argued successfully that using the impulse noise to assess the risk for hearing loss makes the assessment much more difficult and would almost never have had an effect on the outcome. The OHAO's advice was followed and the impulse noise limit has been excluded. It is a well known fact that when the averaging is done with a 3 dB exchange rate, the energy of the impulse noise can be included in the measurement result. Almost always the resulting $L_{ex,8}$ will reach 85 dBA before any eventual impulse limit¹ is violated.

Now the bad news: The above is virtually the only change made to the regulation.

There is no description of how the $L_{ex,8}$ is to be measured (although CSA Z107.56 may be the default approach).

No requirements are made for audiometric testing or the manda-

tory introduction of hearing conservation programs in the workplace.

Also, there is no description of how to choose hearing protection devices (again, CSA Z94.2 may be the de-facto method of choice).

Several of these shortcomings should be addressed in the forthcoming MOL Guideline that will help users implement the regulation.

Meanwhile, MOL deserves congratulations for finally bringing their noise limit in line with the rest of the world. Who knows, perhaps someday the US will follow suit. For those wishing to see the changes, the URL is: http://www.e-laws.gov.on.ca/DBLaws/Source/Regs/English/2006/R06565_e.htm

¹ Usually this limit is set at 135 or 149 dBPeak



CANTEST
 A LIFE SCIENCE COMPANY
 INDUSTRIAL HYGIENE
 Accredited Industrial Hygiene Analytical Testing Laboratory

- 100% Canadian owned
- Free media and shipping for OHAO members

Call 1 800 665 8566 or visit www.cantest.com

Sharing Ideas

—Column Editor—

*Carl Woychuk, MHS, ROH, CIH
Group EHS*



Working at Heights

Approximately 60,000 workers are injured each year due to fall accidents. This number represents about 15 per cent of lost-time injuries that were accepted claims by workers compensation boards or commissions across the country. This includes same level slips/falls, and falls from heights.

Falls account for about 72 deaths per year – almost 10% of workplace fatalities in Canada.

Tips for prevention:

- Identify where the potential for falls might exist.
- Verify that there is sufficient traction between footwear and the walking surface.
- Verify that walking surfaces are stable.
- Put up guardrails and barriers to prevent falls from one level to another.
- Keep floors and grounds clear of materials, tools, debris and equipment.

Employees have fallen over hoses, from lift trucks, down stairs, off loading docks, while climbing dumpsters, and from ladders and scaffolds. Take preventive measures even on small or short duration jobs.

Additional activities may include:

- Correcting housekeeping hazards.
- Correcting conditions that can cause hazards, including those caused by

weather conditions, and poor lighting or visibility.

- Provide, maintain and properly use equipment/devices to help avoid falls (ladders and scaffolds; guard rails and barriers; man lift equipment).
- Provide, maintain and properly wear personal protective equipment (PPE) (Fall protection systems and equipment).
- Establish safe work practices.

Remember, by assessing the degree of risk of the suspected or identified fall hazard, you may be able to set workplace standards, expectations, and rules for preventing falls at your workplace.

On the Hygiene Front

—Column Editor—

*Jim Desormeaux, OHST, COHC
Ontario Power Generation*



Since the weather has been co-operating lately I will focus on summery things:

- Quest offers Heat Stress Monitors. Area heat stress monitors are very valuable for their ability to provide simultaneous protection to groups of workers with a single instrument. QUESTemp^o Thermal Environment Monitors a dry bulb sensor measures ambient temperature; a wet bulb sensor takes into account evaporative cooling, giving an indication of the effects of humidity on an individual; and a globe sensor provides an indication of the radiant heat exposure on an individual due to either direct light or hot objects in an environment. You can

reach them at <http://www.quest-technologies.com/Heat/index.htm>

- There are heat stress freezer pops now available. What is different here is that they are scientifically developed to be absorbed into the body and replenish electrolytes and minerals, areas where proper rehydration is needed You can reach them at: <http://www.sqwincher.com>
- If you need an instrument that will measure physiological body core or skin temperatures go to the following: <http://vitalsense.respirionics.com/>. The disposable telemetric sensors provide accurate data that can be transmitted and logged continuously for up to 10 days. The unique ID of each sensor is automatically identified by the VitalSense monitor to avoid cross-talk among sensors on the same subject or in close proximity.

Core body temperature (CBT) is measured by an ingestible, biocompatible, and easy to swallow capsule that is disposable. Skin temperature is measured by a hypoallergenic and water-resistant dermal patch that is also disposable.

- A heat stress cooling vest may come in handy during those hot, hazy and humid days of summer. <http://www.firstlinetech.com>

PhaseCore is a phase change material (PCM) that produces a cooling effect by transforming from a solid state to a liquid state when the temperature rises above a certain activation point.

If you have any products, courses etc. that you want highlighted contact me at jim-desormeaux@hotmail.com

F1

—Column Editor—

*Jim Desormeaux, OHST, COHC
Ontario Power Generation*



When Windows' 98 first arrived on the scene, I was one of the first in line to purchase a copy; then came Windows' 98 SP2, first in line to purchase Windows' Me and yes even Windows' XP Pro. However I was not the first in line for Windows' Vista. Why you may ask. The answer is choice.

Unlike prior versions of Windows I just mentioned, Windows Vista provides two distinct user interface experiences: a "basic" experience for entry-level systems, and a more visually dynamic experience called Windows Aero. Both offer a new and intuitive navigation experience that helps you more easily find and organize your applications and files, but Aero goes further by delivering a truly next-generation desktop experience. I will basically go through each one and you make the choice.

Vista Home Basic

Geared for the average home user, offers the basic functions and features of Vista, including Windows Defender, Photo gallery, Media Player, Parental Controls, Instant Search and Movie Maker. You can work with your programs and files more easily than in previous versions of Windows, plus overall it offers improved security compared to past Windows' versions.

Vista Home Premium

The main advantage here compared to the above is that it offers the Aero interface. Windows Aero builds on the basic Windows Vista user experience and offers

Microsoft's best-designed, highest-performing desktop experience. Using Aero requires a PC with a compatible graphics adapter. A noticeably new element of the Aero experience is the translucent effect of Aero Glass, featuring dynamic reflections and smooth animations. The glass windows create an open, lightweight environment and more importantly, help you to better focus on your content, rather than on the surrounding interface.

Windows Flip and Windows Flip 3D, are two new features that provide a new way to confidently manage the windows on your desktop, so you can see them in a new visually striking, yet convenient way. Beyond the new graphics and visual polish, the Windows Aero desktop experience performs as elegantly and professionally as it looks, with smoother window handling, increased graphics stability, and glitch-free visuals. All of which give you a simple, comfortable, and high-quality experience.

Vista Home Premium: Glass

Aero features windows that are truly translucent. In addition to giving the desktop a more polished look and feel, the effect of glass allows you to more easily focus on the contents contained within a window, and also provides better context for the surrounding elements on your desktop while you're working.

Vista Home Premium: Dynamic Window

All windows are dynamic. This means that when minimized, a window will subtly animate to a specific location on the desktop which makes it easier to locate if needed later.

Vista Business

Mostly the same features as Home Premium minus the entertainment tools (Windows Media Centre). However it does add a Built-in Diagnostics tool which protects data in the event of hardware failure. It also adds the Remote Desktop Utility which allows remote access to applications and resources (similar to XP Pro) and improved support for Tablet PC.

Vista Ultimate

It's like a combination Home Premium and Vista Business with a few extras. They are BitLocker drive encryption, improved configuration control for games and Ultimate Extras which is a collection of programs and services only to Ultimate.

Vista Enterprise

A ramped up version of Vista Business geared towards large business. It includes a subsystem for Unix based applications

There are way too many features to go through here but check http://www.microsoft.com/windows/products/windows-vista/default.aspx?wt_svl=20372a&mg_id=20372b for more details.

Very complicated but I am sure you can figure it out and pick the best one that is suited for you. Any comments email at jim-desormeaux@hotmail.com

Spring Symposium 2007

Our spring symposium was very well attended and covered some up and coming topics. The overall theme of the symposium reinforced that hygienists will continue to be in demand and can look forward to new opportunities.

Otto Peter set the scene for GHS timing in Canada. Overall, Canada will need to monitor what other jurisdictions are doing and be prepared to react accordingly. Otto also covered what was happening in the U.S. and the process of how WHMIS regulations will be revised. Will something happen in the next two years? Stay tuned!

Cathy Dumschat did a great overview of how GHS will affect MSDS writing. GHS will change the entire way products are classified and will require all hazards to be

declared. Hygienists will need to search for more data such as corrosion data and use the weight of evidence approach when interpreting data.

Brett Ibbotson showed hygienists that new work is on the horizon as a result of changes to Environmental Regulations in Ontario. Do you want to join a team of experts in health toxicity, ecotoxicity, and hydrogeology, etc. to conduct risk assessments? The work is there and with toxicologists and epidemiologists in short supply, hygienists may find themselves drawn into this work willing or not!

One of the newest additions to the spring symposium was a series of case studies. These were very well received.



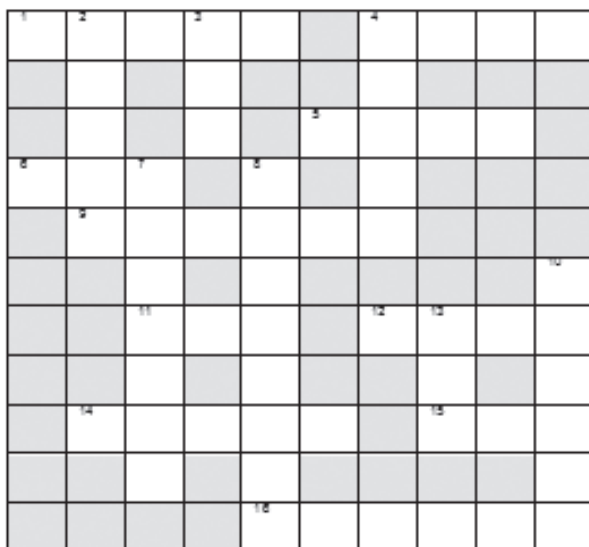
Attendees Juliana Woo, Evelyn Stefov and Holly Yuen

- Lydia Renton covered an unusual case of Carbon Monoxide poisoning
- Bill Gibson talked about low frequency sound arising in health concerns
- Lorraine Shaw covered occupational exposures to metalworking fluids

Thanks to all our speakers who made this a very successful symposium.

Crossword

prepared by Ray Lawrence, BSc, CIH, CRSP



Across

1. Ear _____
4. Short Form for Exposure limit
5. _____ grab
6. Legal Exposure Limit
9. Good work practice to avoid RSI's
11. One man, One lock, One _____
12. WSIB _____ statement
14. Fixed _____
15. Respirator
16. Heat _____

Down

2. Type of explosive limit
3. Sour _____
4. Control for excavation hazard
7. Controls hazardous energies
8. Harnesses and _____
10. Good to avoid from MOL
13. A way to decrease stress

See page 16 for answers

Hugh Nelson Award

The Hugh Nelson Award nomination committee members were assigned the difficult task of choosing this years recipient from a group of extremely qualified candidates. I must thank the team for participating. The Hugh Nelson Award is presented to the individual who personifies what Hugh Nelson stands for. Otto Peter, this years recipient, has demonstrated these attributes. His commitment and contributions to the field of industrial hygiene, his leadership and involvement and the respect he is given from his peers is apparent. Congratulations Otto!

Acceptance Speech by Otto Peter

I am following in the footsteps of very respected and excellent hygienists who have been recipients of this award in the past. I don't think any of the others did their work thinking that they would win any accolades and I certainly haven't. I am honoured first to be nominated and then chosen as the recipient of the Hugh Nelson Award. Thank you. My 30 year old son asked me what the award was for a couple of years ago and after painstakingly describing what is required he looked at me and with a smile said "Oh I know what it is for, Outstanding Achievement in the field of excellence." Children of all ages can sometimes be very trying.

Although I never had the pleasure of working with Hugh Nelson I have come to appreciate over the years what a true gentleman and mentor he was to many people not only in the occupational hygiene profession but in other aspects of his life. I really appreciate your being here today to present me with this honour which is in your name. Thank you Hugh.

I want to start by giving you a little about my history and how I got to where I am. For those of you who have heard this

before you are permitted to fall asleep or day dream.

I began my IH career in a kind of an unusual way. Even though my degree was in Biology with a double major in Botany and Zoology I ended up working at Monsanto in Sarnia basically being a chemist in the quality control lab and doing basic research. Being a chemical plant, about five years after it opened they decided that rather than have the US IH's come to Canada that we should have someone at the plant do the job. They created an IH environmental/coordinator position that I was asked to take. Talk about finding your ideal job. I thought I had died and gone to heaven. I had had an interest in the environment ever since my university days so that was great. It was the hygiene part that really turned my crank. Here was a job that actually put to use my knowledge of the human body, chemistry, laboratory

equipment and instrumentation and they were willing to pay me to do it and I didn't have to work shifts anymore (it was a 24/7 operation). Contrary to popular belief, Monsanto had a very strong SHE department, one of whom John Henshaw, one of



Hugh Nelson presents Otto Peter with the Award of Excellence in Occupational Hygiene

my mentors later became the Director of OSHA in the US. They fast tracked anyone that did IH into becoming a CIH. They had a very comprehensive program. It was like going back to school. I received four huge binders with more information than I knew what to do with and they allowed me to take many courses and seminars. Then all of a sudden we all received a very

unwanted Valentine's present, they were closing the plant and we were all out of work that very day. Though I had only been doing the IH job for a few years, I knew where my future lay. I started looking for a job that had a large IH component. During my job search I actually spoke to a number of IH's in Ontario some of whom would later win the Hugh Nelson Award. They might not remember the conversations but my records don't lie. After a few months of looking, I swallowed my pride and went to work for Karl Doerwald at General Motors in Divisional Personnel as an IH tech. When I say I swallowed my pride I meant that instead looking for a manager's job running a SHE program I faced reality and took a job more suited to where I really was in my skill sets. At the age of 35 I actually beat out a group of 11 snotty nosed little kids just out of college and university for the job. It is only a myth that I bribed some of my competitors to tank their interviews. After only a few weeks on the job I thought I had died and gone to heaven again. Of course I remembered vividly the last time that happened to me which resulted in being out of work not soon after! At that time GM of Canada had a wide variety of operations in Canada, including a foundry, a locomotive and bus plant, five parts plants that made an enormous variety of components, five large assembly plants and a plant that made seats for vehicles. They used over 10,000 different chemicals in a myriad of processes. It was something new every day. I continued on my quest for certification and

wrote my first exam in Detroit in 1984 and passed it first try. Monsanto's preparation materials were awesome. The next year I wrote the comprehensive exam in sin city, Las Vegas at the IH conference. I thought I had failed but imagine my surprise when I got that awesome letter addressed to Otto Peter CIH, what a relief. I then discovered OHAO. It was hard not to, since my boss had been president. Basically I have been active in OHAO ever since, but more about that later.

Why Occupational Hygiene you may ask. I found it a challenge and I really liked helping people. I tell everyone who will listen to me that you need to have empathy with the worker if you want to be a



Otto Peter, Hugh Nelson and Lorraine Shaw. Lorraine Shaw accepted the Hugh Nelson educational award on behalf of McMaster University

good hygienist. I have always approached a complaint or a request with the attitude that there really was a problem that needed to be solved and that's what my job was. Many times the issues were not about hygiene but more labour relations, but by doing my job the problem was still able to be solved. Of course sometimes it was difficult to approach a problem without some

skepticism. Very early on I was asked to go to the truck plant to meet the management H&S representative to look at a problem. I was early so I stopped to observe an interesting operation not far from his office for about 15 minutes. Once I met with him we went out to the plant and he lead me right back to the same operation. I didn't say anything about having been there earlier. The employee who had the concern said that whatever the odour was it was gone but you should have been here 15 minutes ago. Since I had been there 15 minutes ago and there was no problem I wondered if there might be another reason for his complaint. There was, he had been having problems with his supervisor and he had used the pretext of an H&S call to bring attention to the problem. It has always been difficult to deal with individuals that were concerned about an odour or some chemical in the plant all the while puffing on a cigarette. I will never forget having a whole paint shop walk off the job because of a transient odour coming in through the make up air system. During the investigation my real time air monitors did not indicate anything out of the ordinary but when I stepped into the lunch room where everyone assembled, all the instruments went into alarm mode because of the thick pall of cigarette smoke. Try explaining that to 50 irate employees. I believe it takes a lot of skill to exit a room like that alive. I still love going out in the plant to help solve a problem and alleviate any fears an employee may have. It is really what OH is all about.

I have not done what could be called classic research and written papers for Journals etc. However my research was

done in finding the fastest way to investigate a problem and evaluate it to ensure the safety of our workers. In an assembly plant you don't have the luxury of taking 8 hour samples and waiting for the lab results. We needed to be fast and innovative. I had spent a lot of time with real time organic vapour analyzers at Monsanto so I thought why not at GM. One thing we had noticed at GM was that 90% of every long term sample we had taken in response to employee concerns came back at less than 10% of any OEL. Could real time analyzers do the trick? Absolutely! While we still did the tried and true long term samples for compliance purposes, we typically went with real time for employee concerns or when engineering changes were necessary. It sure made our jobs easier. One time I remember we had to try to determine which of two washers was emitting irritating mists, an acid or alkali one. What to do? What to do? We were using a particulate analyzer in the area but because of the air currents it was hard to determine the source. What to do, what to do? Just then a chemical control employee walked up and took the pH of one of the tanks and then it hit me. What if I waved a broad range piece of pH paper in the air, might it show me where the mist was coming from? Eureka it sure did and by looking at the concentration of the colour change I was able to actually pinpoint the location of the air leak which was not obvious to us standing at floor level. Now that is what I call a real time air analyzer. Be innovative, think outside the box.

As I gaze out I see a number of IH's here that I worked with in the past at GM. Mentoring coop students, and those fresh out of

school is one area I really enjoy. I believe that that is one area that all experienced hygienists should really put an effort into. We've seen it, experienced it, lived it, why not pass that knowledge and experience on to those new comers or even to your peers. That is also why I give presentations at IAPA, OHAO and other safety organization symposia and work on other committees like GHS and CCOHS. Transfer of knowledge is power.

One area I think that we as a profession have been lax in is in working with the regulators to make sure that we have the best, well thought out OH regulations. Believe it or not the people at the MOL who write new regulations and guidelines want and need your input. That input can be as a single Occupational Hygienist or it can be from a company or an association like OHAO or CVMA. We have always been welcomed with open minds when we have made suggestions and many changes have been made because of our suggestions. We have a lot of experts here in this room on a wide variety of topics. As new regulations and guidelines are proposed I challenge each of you to study them carefully and send your comments in for consideration. Remember you are the ones who are going to have live with them once they are in place.

Keeping up my knowledge base has been an important part of my job. There are new facts being learned every day about a vast array of subjects. I have heard it said that 75% of what a university student in the sciences learns in first year is obsolete by the time he or she graduates. Just think, atoms only had 3 parts when I went to university

and today we have charmed and top and bottom quarks and bosons and only God knows how many other particles. To illustrate I will use the poetry of a very famous American Donald Rumsfeld who once said.

**As we know,
There are known knowns,
There are things we know we know,
There are unknown knowns,
That is to say
We know there are some things
We do not know,
But there are unknown unknowns,
The ones we don't know we don't know.
You might well say HUH?**

But think about it. In our profession there are known knowns such as that asbestos causes lung cancer; there are known unknowns such as what are the future health effects of nanoparticles and then there are those unknown unknowns that will rear up and bite in the future like asbestos or VCM monomers did in the past. We need to be ever vigilante and work hard as a profession to ferret out those unknowns before they can do harm. Even though it is hard sometimes to separate fact from fiction don't be afraid to "google" something and learn something new every day. You never know when you may need it.

To switch gears a bit I want to say a few words about OHAO. I have been proud to be a member of this organization for over 20 years. I have always felt that no matter what group I belonged to that I had to give something back. Organizations like OHAO

do not spring out of the earth full grown and mature. It takes a tremendous amount of work by volunteers to start them and keep them growing. I challenge all of you here today to take a look at yourselves and say “what can I do to make this organization better and to help keep it running”. Sure everyone is busy these days. But the executive and all the committee chairs and members are all busy people too but they take the time to make sure this organization

keeps going. Who do you think planned the symposium and this lunch, or read all the submissions so I could get this award today. Remember many hands make light work. OHAO needs your help in many ways, to be a Director, to chair or sit on a committee or work on a symposium. What you do can be as small as making phone calls to lapsed members to find out why they did not renew or helping review a new

MOL Noise regulation guideline to ensure that is accurate and useful to industry.

I just want to end by saying thank you again to the selection committee for honouring me by presenting this award and I hope I can continue to live up to the honour.

Working for a Safe Ontario

The Workplace Safety and Insurance Board (WSIB) plays a crucial role in the province’s occupational health and safety system. We are committed to working for a safe Ontario and committed to service excellence. We provide benefits and services to workers who have suffered a work-related injury or illness. The vision of the Workplace Safety and Insurance Board (WSIB) is the elimination of all workplace injuries, illnesses and fatalities.

OCCUPATIONAL HYGIENISTS

The organization is currently seeking career-oriented professionals in our Toronto office.

The occupational hygienist is responsible for providing evaluations of current and historical worker exposure to hazardous substances; compile exposure profiles using retrospective exposure assessment and other techniques for Ontario workplaces; prepare concise exposure histories, provide detailed information on the extent and likelihood of worker exposure and provide expert opinion on worker exposure to hazardous workplace conditions in order to facilitate high quality and timely decision making of occupational disease claims.

You must have an undergraduate degree in physical sciences or engineering, a Masters degree in occupational hygiene or occupational health or equivalent and certification by the Canadian Registration Board of Occupational Hygienists (CRBOH) as Registered Occupational Hygienist (ROH) or by the American Board of Industrial Hygiene (ABIH) as a Certified Industrial Hygienist (CIH) with related experience.

A highly motivated professional, you enjoy working independently and as part of a team. You have knowledge of trends and developments in occupational hygiene to maintain currency of expertise. Excellent interpersonal, communication skills and computer skills are essential. You may be required to do some travelling.

Visit our website at www.wsib.on.ca for further information about the WSIB.

Please submit your resume by September 28, 2007 to: **Cori Di Pietro, Employee Relations Consultant, Human Resources, Workplace Safety & Insurance Board, 200 Front Street West, 19th floor, Toronto, Ontario, M5V 3J1.** Only candidates selected for an interview will be contacted.

The Workplace Safety & Insurance Board is an equal opportunity employer.

Changing Information?

**Title, employer,
address, telephone,
email changing?**

**Don't forget to advise
the OHAO office
so the appropriate
changes can be
made to our records.**

Managing OHS & E



—Column Editor—
*Ray Ilson, MEng, CIH, CRSP,
CRPA (R)*
University Health Network

Emergency Response— A Proactive Approach

Many hygiene professionals have experienced a lack of understanding and even unfounded fear of certain hazards by members of the general public, elected representatives, and even other professionals. Physicians have questioned such diverse examples as the exposure of workers to well contained non-friable asbestos or to background amounts of radiation exposure to technologists and nursing staff. In light of the recent investigations and reports by the media questioning the proper personal hygiene of hospital physicians in the post(?)—SARS and avian influenza era, these concerns are truly trivial. However such reports, through ignorance, may result in lost-time from work, potential WSIB concerns, needless stress to workers and even loss of employment. On the other hand, those individuals responsible for true emergency response such as emergency medical, fire and police services are often ignored until an emergency arises. At that point these professionals are expected to respond in a timely and effective manner. With this in mind, the importance of awareness of hazards, their relative risk, training, appropriate controls and communication both internal and external to the organization must be stressed once again.

Such lack of awareness again arose recently at a review of improvements in the control of hazardous materials in the health care sector. A senior member of staff noted the effective education and training of the actual users of such materials but expressed concern over communication with those other workers who never actually contact the material but who do enter areas of use e.g. Nursing staff, housekeepers, tradespersons, security personnel etc. She related this to her experience in the past when a large-scale laboratory fire resulted in considerable loss of equipment and data.

Awareness and training programs for those immediately in contact with such hazards are required of course. Awareness training must also be provided for all workers in the potential hazards in their workplaces, the controls in place and the expectations of the employer and staff in ensuring the protection of the workers. The housekeeper for example should be aware of the potential hazards present, the signage identifying such hazards, the existing controls and trained to recognize and respond to unusual incidents/spills/exposures.

Of course, there must also be training and practice of emergency response for those situations where existing controls and defenses fail. This includes emergency situations where entry into a known hazardous area becomes necessary to save lives or property and involves emergency responders such as trained internal staff or external emergency medical, firefighters, police etc. There have been frequent concerns regarding the potential exposure of such responders, particularly HazMat Teams.

The HazMat Teams of the fire services are very well trained to respond to a wide variety hazards. Fortunately, such responses appear to be generally workplace specific, usually dealing with a small number of hazardous materials in a given workplace, with the caveat that these materials may be on an industrial scale and therefore of large volumes. While volumes are generally smaller in hospital and university settings, such responders rarely experience the numbers and variety of hazards found in laboratory environments. Here there are often biological agents, chemicals, electrical equipment, other flammables/explosives/toxins and radiological hazards within the same room as well as all neighboring rooms.

Internal staff such as users must be trained in the potential hazards and precautions in handling the materials, which they are required to use, as well as spill, and personal contamination response. As back-up to the actual users of the hazardous material, internal emergency response teams may be trained to respond to the known hazards in the specific workplace, be provided with and maintain adequate response equipment for such incidents and be allowed time to practice such response, assess its effectiveness and report to senior management. This is generally the case, with awareness and response training being provided to all new staff on a regular basis and existing staff receiving at least annual refresher training. The most common weakness is probably the proper maintenance of the emergency response equipment and materials.

However, in the event of a larger scale accident or fire involving locations of such hazards, the expectation will be a timely and adequate response by outside professionals such as the HazMat Teams and associated pumper crews. As noted earlier, concern by fire fighters with the variety of biohazards, chemicals and radioactive materials in routine and research laboratories in a local hospital led to the loss of an entire laboratory and considerable research materials. Apparently the fire was “fought from the doorway” due to emergency responder concerns with the indications of hazardous materials stored in the laboratory.

A proactive approach is necessary to establish contacts with these responders, to assist them in the most reasonable assessment of risk and establishing a risk-based response to these concerns. Health and safety staff at a number of universities and hospitals have developed this approach. For example, such responders who have been identified as the local response teams should be invited to participate in a brief presentation and discussion of the potential hazards present at your workplace, followed by site visits to areas of higher risk as well as general usage areas, storage and waste facilities. This provides the responders an opportunity to be physically present in these areas in a non-emergency situation, ask questions and consider scenarios, practice the use of their instrumentation and prioritize any risks. In turn, the health and safety staff will likely be impressed by the skills and training of the emergency responders.

AIHCE 2007

This year’s American Industrial Hygiene Association Conference was held in Philadelphia PA. I had never visited Philadelphia and had some concerns that it might prove to be a large, impersonal place which “rolled up the sidewalks” at 5:00 pm. I could not have been more mistaken. Philadelphia, “the City of Brotherly Love” is a city where people live and work. I have never seen a city full of so many fountains, sculptures and murals. The convention center, located in “Centre City” (what native Philadelphians call downtown) was across the road from the famous Reading Terminal Market where you could buy fresh produce or enjoy an authentic Philly Cheesesteak sandwich with “Cheez Whiz”.

A surprise visitor at the conference’s opening session was Benjamin Franklin. Steve Uzzell, an award winning photographer from National Geographic gave a thought provoking opening address on “Open Roads, Open Minds: An Exploration of Creative Problem Solving” accompanied by stunning photographs. Wednesday’s opening session was a live talk show format with Dave Johnson from Industrial Safety and Hygiene News interviewing Edwin G. Foulke Jr., Assistant Secretary of Labour, OSHA and John Howard, Director of NIOSH.



The conference included many informative PDCs and courses. I attended a course on AIHA laboratory accreditation.

Sessions were held on such diverse topics as nanotechnology, airborne infectious disease and hexavalent chromium exposure.

The trade show highlighted numerous new products and even included a draw sponsored by AIHA to win a Harley Davidson Motorcycle.

Canadian industrial hygienists met at the Canadian Dinner, at Maggiano’s Italian Restaurant, organized by Len Hong and his staff from the Canadian Centre for Occupational Health and Safety (CCOHS). It was a great opportunity to get together with friends old and new, from across Canada.

Canadian occupational hygienists from the Canadian Council of Occupational Hygiene (CCOH) and the Canadian Registration Board of Occupational Hygienists (CRBOH) met with representatives of the AIHA International Affairs Committee. The meeting was an opportunity for Cana-

dian occupational hygienists to introduce CCOH to the AIHA and exchange ideas between the two associations. Milli Mavely, AIHA Program Manager, Standards and International Activities, was very helpful in explaining the relationships and interactions between AIHA National and the AIHA Local Sections. Ideas discussed at the meeting included CCOH having a regular section in “The Synergist” on Canadian Issues. An extra day at the AIHCE devoted to Canadian Issues was also suggested.

Of course, no visit to Philadelphia would be complete without running up the stairs of the Philadelphia Museum of Fine Art, with arms raised in triumph, in imitation of Rocky Balboa.

Lorraine Shaw, B.Sc., CIH, ROH
CCOH President



Crossword Answers

1	2	3	4	5	6	7	8	9	10
P	l	u	g	s	s	t	e	v	
	0	a			l/h				
	w	s		5	r	o	p	e	
6	e	l		8	p/r				
	9	r	o	t	a	t	e		
		c		n					10
		11	k	e	y		12	13	14
			o	a			a		d
	14	g	u	a	r	d		15	p
		t		d					p
				16	s	t	r	e	s
					s				s