



# minerva UPDATE

INTEGRATING OCCUPATIONAL HEALTH AND SAFETY CONCEPTS INTO MANAGEMENT EDUCATION



Minerva Canada National Chair Tony Pasteris[r] of Imperial Oil and Ontario Co-Chair Len Hong[l], a Minerva Board member and CEO of the Canadian Centre for Occupational Health and Safety, were among the many participants at an action-oriented CEO Forum on health and safety held this spring.

## Business Leaders Sign Charter

More than 50 CEOs from across Canada signed a *Health & Safety Leadership Charter* this spring at the Industrial Accident Prevention Association Health & Safety Canada 2005 Conference. See page 4 for details on the groundbreaking commitment these leaders have made to improving workplace health and safety.

## Successful Summer Institute Returns

The **2005 CSChE Summer Institute on Industrial Safety and Loss Management** drew an enthusiastic group of both repeat and new attendees for three days this May in Sarnia, Ontario. Chemical engineering professors from universities across Canada participated in this collaborative effort of the Canadian Society for Chemical Engineering, Process Safety Management Subject Division, and Minerva Canada, with financial support from industry. Launched in 2004, the objective of the Summer Institute is to develop chemical engineering student education about safety, health and environmental management.

The Institute featured traditional classroom learning, discussion groups and site visits to local industries. There was a truly international flavour this year, with presentations from the National Safety Council (NSC) in Chicago and a case study from Washington's Georgetown University on Noble Corporation, winner of the 2004 Robert W. Campbell Award (see page 5).

Second-time Summer Institute participant Frank Collins, PEng, who is a Senior Instructor in the University of New Brunswick Chemical Engineering Department, thinks a clear definition of safety awareness and its importance should be developed for engineering grads. "I sensed an increased awareness among my colleagues at the Institute that such a curriculum is needed," he says.

**"I think we're on the right track... we can't stop the wheels from turning."**

Frank Collins

As a first step towards standardizing teachings, Frank and two other workshop participants – Bill Anderson of Waterloo and Aaron Phoenix of Saskatchewan – are collaborating to produce a package that can be used as a standard hazard analysis teaching tool for university instructors. There will be four other modules on various Process Safety Management topics – each with different developers from academia and industry – that will be beta tested by the Institute's attendees and later made available through the CSChE website. Stay tuned for the release date.

See page 2 for more on the Summer Institute.

## PRESIDENT'S MESSAGE



David Halton

I recently took on the presidency of **Minerva Canada** because I have always believed in its mandate.

Introducing safety, health and environmental (SHE) management into our business and engineering curricula is the right thing to do.

Minerva's goal is short term, finite, and achievable. If accomplished, it holds the promise of real and measurable reductions in lost time accidents and injuries, a vision that is shared and should be supported by all workplace safety agencies. A group of dedicated, loyal volunteers has kept the organization going, despite their own busy careers.

Minerva has great potential but is hindered by a lack of human and financial resources. For that reason, my first priority is preparing a comprehensive business plan to secure sufficient funding to support a small staff for five years. In this timeframe, Minerva could accomplish much of its goal.

We envision the creation of stakeholder committees in each jurisdiction – similar to those already active in B.C., Manitoba and Nova Scotia – targeting their colleges and universities to introduce safety management. The professors will be encouraged to attend the Summer Institute to be trained and grants will be made available to research case studies for use in the curriculum.

This approach would enable the provinces to benefit from economies of scale. Minerva's challenge is to find the funding. The best opportunities will come from aligning with organizations currently operating programs in accident and injury prevention. The Ontario Workplace Safety & Insurance Board (WSIB) is already a strong supporter, but we need more partners from across the country. In the months ahead, we will be presenting funding proposals to interested organizations.

In this issue, we feature one of the key deliverables of Minerva Canada – the Summer Institute, which, along with our case studies, is a demonstration of how we are engaging academia in a meaningful way. This is just the beginning.

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# FANTASTIC IMPORTANT INTENSE

## Second Summer Institute a Resounding Success

"Fantastic." "Important." "Intense." These are some of the ways participants described the **2005 CSChE Summer Institute on Industrial Safety and Loss Management** held in Sarnia, Ontario from May 29 - June 1. "My participation in both institutes has given me a better appreciation for the importance of this topic and provided a very clear picture as to the areas where process safety management (PSM) can be included in our curriculum," says André Y. Tremblay, P.Eng., Ph.D., Professor and Chair, Department of Chemical Engineering, University of Ottawa. "It will permit a better integration of PSM material in our courses." He was one of 25 chemical engineering professors – 15 returning from last year's inaugural Institute and 10 new ones – who took part in the three-day learning experience, designed to introduce professors, teachers, and lecturers to the principles of Safety, Health and Environmental (SHE) management.

Its specific objectives are to:

- Encourage industry and universities to work together to ultimately improve safety and loss management in industrial workplaces
- Provide knowledge to professors on what to teach, how to incorporate topics into curriculum and what resources are available
- Provide knowledge to industry on how to assist universities
- Establish a follow-up program to provide continuing support
- Gain university commitment to a strategy on how to implement SHE topics into curriculum.

Presented by Minerva Canada in collaboration with the Canadian Society for Chemical Engineering, the program included good industry participation (see page 3). "I'm very



An industrial site visit to Nova Chemicals in Mooretown was a popular component of the **2005 CSChE Summer Institute on Industrial Safety and Loss Management** held this spring in Sarnia, Ontario. Engineering professors and industry representatives from across Canada participated.

impressed with the commitment of industry and their presence at the Institute," says Paul Gallina, a business professor from Bishop's University in Quebec, who monitored the proceedings to assess the feasibility of a similar event targeted to business schools. "They deserve a big thanks!"

"The Summer Institute is the brainchild of the CSChE-PSM Division and a direct result of the interest and focus on PSM developed through the 1980's and 90's by the Major Industrial Accidents Council of Canada (MIACC)," says Professor Doug McCutcheon, Chair of the Steering Committee. "If we are to make an impact, we must provide the fundamentals to all future engineers and managers and, by including these in curriculum, Canada will see the benefits solidly entrenched in the very near future. We are pleased to be able to work with Minerva Canada on this challenge and to see such success in such a short time is wonderful."

"At BASF Canada, all employees are responsible for ensuring compliance with health, safety and environmental laws and regulations, as well as working to prevent injuries to themselves and others. By supporting Minerva Canada and the Summer Institute Program, we are helping instill these principles in future business leaders."

*John Clarke, President, BASF Canada.*

## Participation spurs actions

Among the highlights of the 2005 Institute:

- insightful presentations from experts across the country knowledgeable in process safety management
- a presentation by Georgetown University professor Brooks Holtom on the Noble Corporation case study that captured the inaugural Robert W. Campbell Award (see page 5).
- industrial site visits to Nova Chemicals and Imperial Oil

"Since most professors have had limited industry experience, they really appreciated the industry tours," says Minerva Chair Tony Pasteris, who was among the Minerva delegates attending.

As a result of participating in these Summer Institutes, "academia is beginning to embrace a health and safety mindset and is seeking tools for adoption," adds Minerva Committee member Renzo Dalla Via, who was part of the Institute organizing committee. "And European academic bodies have even expressed an interest in the whole concept."

What second-time attendee Frank Collins of the University of New Brunswick found most valuable this year was hearing the Noble case presentation. "I'm designing a new course for our department based on economics and safety in design strategy and Noble will be a perfect fit as a case study." He also enjoyed the meetings with other instructors and different industries. "They helped to bring different perspectives and focus on safety."

Frank's biggest take-away from this year's meeting was a confirmation that there needs to be an industry-defined, university-engi-

neered standard curriculum for Process Safety Management in universities across the country since opinions and approaches on PSM vary from industry to company to person. "Left unguided, I fear professors will integrate select,



The Summer Institute featured traditional classroom learning as well as discussion groups.

comfortable safety topics into their courses, leaving important ones out of the program." That's why he has teamed up with other Institute attendees to develop a standard hazard analysis teaching tool (see page 1).

This is just one of several initiatives spawned by participation in the Institute. Michael Pegg, Ph.D., Professor and Chair, Chemical Engineering Program, Department of Process Engineering and Applied Science, at Dalhousie University, will be preparing one of the teaching modules. "I consider it a labour of love and a worthwhile outcome," he says, adding that he left the Institute with a sense that a consensus is near on what should form a core of safety knowledge to be taught in chemical engineering curricula.

## Results impressive

"A number of our Minerva Canada volunteers put in a great deal of effort on this year's program and I think the tremendous results speak for themselves," emphasizes Minerva Ontario's Co-Chair Len Hong. This concept for engineering professors has been so successful that a similar Institute for business professors is being planned.

"The National Safety Council (NSC) in the U.S. has shown an interest in having Minerva's next Summer Institute open to Canadian and U.S. participants and targeted to business school professors," says David Halton, President, Minerva Canada. "This dovetails well with our partnership with NSC on the Campbell Award." (see p 5).

For more information about participating in future Institutes and accessing available resources, engineering professors should contact Prof. Doug McCutcheon, [doug.mccutcheon@ualberta.ca](mailto:doug.mccutcheon@ualberta.ca); business professors should contact Prof. Paul Gallina, [pgallina@ubishops.ca](mailto:pgallina@ubishops.ca)

## Summer Institute Sponsors

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*"It is without doubt that both Institutes will serve to further instill safety as a core value in our graduates."*

André Y. Tremblay

# CEOs Commit to Improving Health & Safety

Continued from page 1

The *CEO Health & Safety Leadership Charter* is a new initiative with a goal to achieve breakthroughs in health and safety performance in workplaces across Canada. This *Charter*, championed by Duncan Hawthorne, President/CEO of Bruce Power, and signed by 50 CEOs from across Canada during the 2005 Annual Conference of the Industrial Accident Prevention Association (IAPA) held in Toronto this spring, is a commitment to improving workplace health and safety performance by sharing best practices.

Duncan challenged the senior executives to not only support health and safety but to mentor and help each other. "Our vision is to see the coalition grow to 200 companies next year and raise the standard across Canada so workplace accident statistics won't look as stark as they do now," he said. "We can all benefit from benchmarking."

*"This is a significant milestone."*

Maureen Shaw

During a CEO Forum held during the conference, participants identified their companies' safety strengths and weaknesses. This "safety profile" is being used to help match firms that can assist each other in improving safety performance. The Forum culminated in the agreement and official signing of the *Charter* the following day.

"After 25 years in this industry, I have never seen a group of CEOs come together to talk about health and safety for more than five minutes," said Maureen Shaw, President and CEO of IAPA, which hosted the CEO Forum. "This is a significant milestone in our province and country and probably the world."

To learn more about the initiative and how to join, visit [www.ceosafety.com](http://www.ceosafety.com).

## Academic Corner

### UOIT includes Minerva case study in course

The University of Ontario Institute of Technology (UOIT) is using a Minerva-sponsored case study, *Cover-Shield Failure and Falling Incident at a Hydroelectric Generating Station*, in the course Collaborative Leadership (BUSI2000U), which is a general leadership, teamwork and management course taken by its degree program students, be they in commerce, business, justice studies, engineering or science. Written by Marc A. Rosen, Ph.D., P.Eng., Professor and Dean, Faculty of Engineering and Applied Science, at UOIT, the case study fits well into this course since it takes a technical and management issue dealing with safety - a matter of concern to all disciplines - and uses it to illustrate how technical and management disciplines come together in the real world.

"During the guest lecture I gave using the case study, it was wonderful to follow the student discussions about whether the accident discussed in the case study was the fault of technical people within the company, or those in finance, or senior management, or others," explains Prof. Rosen. "The case allowed many issues in business and engineering, as well as in other fields, to be brought to life."

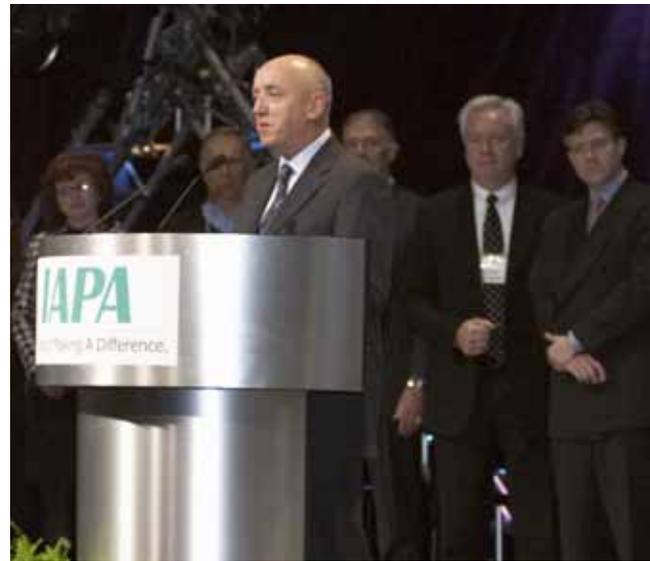
Visit [www.minervacanada.org/students](http://www.minervacanada.org/students) to access this case study.

### Northern College integrates safety into mining curriculum

As the next generation of mining technologists opened their text books at Northern College in Haileybury, Ontario last fall, they found health and safety as one of the subjects in the curriculum. And students in other courses are seeing the same focus, as the college integrates safety across its programs. "Our intent, our focus on this issue is that no matter what certificate or diploma you earn, health and safety is a part of that," says Northern's President Michael Hill.

The increased emphasis on health and safety is part of a revamp of the entire curriculum, launched with the 2004-2005 school year at the 90-year-old Haileybury School of Mines (HSM). Hill said the college looks at skill sets and knowledge that are core to all professionals and businesses when reviewing programs. Safety was one of those subjects, and the nature of hazards in mining made it a priority for implementing the change. "Integrating safety into the curriculum is a win-win-win for everyone - for society, for the participants and for the employers of those graduates," says Hill. "Giving students a solid foundation in health and safety will make graduates more employable, and eventually will lead to safer workplaces."

For more information, contact Susan Haldane, Communication Specialist, Mines and Aggregates Safety and Health Association, at [susanhaldane@masha.on.ca](mailto:susanhaldane@masha.on.ca) or 705.474.7233 ext. 261.



*"This whole initiative is about finding and building a relationship to help us all get to a better level and to take others along."*

Duncan Hawthorne

# Regional Reports

## B.C.:

Minerva BC's expanded new working committee, chaired by Lydia Ma, Director of Continuing Education & Outreach at UBC's School of Occupational and Environmental Hygiene, currently includes Phil Claridge of the Workers' Compensation Board, Ed Chessor of UBC, Robert Miller of British Columbia Institute of Technology and Dan Strand of Vancouver International Airport Authority. The committee's activities to date include:

- delivering lectures at Sauder School of Business, UBC, on the business of occupational health and safety.
- development of a case study, with funding from Minerva Canada. Danielle van Jaarsveld, Sauder School of Business, will produce the case study about a large engineering firm based in Vancouver and with offices across Canada that has won awards for its leadership in health and safety. Target completion date is Winter 2005.

The committee also plans to develop an inventory database of all post-secondary institutions in B.C. that offer courses of study in engineering and business and will also continue to expand the working committee to include representation from various industry sectors, professional associations, and BC post-secondary institutions with engineering and business schools.

For more information, contact Lydia Ma at [lydia.ma@ubc.ca](mailto:lydia.ma@ubc.ca) or 604.822.9599.

## Manitoba:

Red River College awarded the first Minerva SAFE Manitoba Award from an endowment fund established through Minerva. The award of \$500 was made to a first-year carpentry student at the College and was granted for the development of a WHMIS Truth or Consequences "game" designed to teach the subject in a more engaging manner.

Other activities of the Manitoba committee include:

- Funding the Faculty of Nursing at the University of Manitoba to create a Web CT program that addresses the issue of body mechanics in health care settings. All nursing students will be required to complete the program prior to starting their first clinical rotation. The project is near completion and will be available this fall.
- A project with the Asper School of Business to highlight the importance of safety and health as a management issue is near completion.

For more information, contact Judy Fraser at [jfraser@gov.mb.ca](mailto:jfraser@gov.mb.ca) or 204.945.5359.

## NEWS UPDATE

### Minerva partners in international award

Minerva Canada is proud to be a Global Partner in the **Robert W. Campbell Award** program. This new international award, jointly underwritten by the National Safety Council (NSC) and Exxon Mobil Corporation, recognizes companies that demonstrate leadership and excellence in business and financial performance by integrating safety, health and environmental (SHE) excellence into their operations. It is named for safety pioneer Robert W. Campbell, who recognized as early as 1914 that "safe work is an economic necessity."

The inaugural award was presented to Noble Corporation, a provider of drilling services for the oil and gas industry, at the Council's 92<sup>nd</sup> Annual Congress & Expo held in September 2004. "Noble Corporation has successfully established and implemented SHE programs that effectively manage key risk exposures. Their exceptional training and certification programs are considered industry-leading practices," said NSC Chairman Jed Bullard. "Complementing Noble Corporation's outstanding safety performance, the company continues to thoroughly investigate and learn from every recordable incident and strive for zero injuries."

Nineteen companies applied for the award and underwent an extensive application process that detailed key aspects of their SHE programs. An international panel of independent reviewers scrutinized each application in a rigorous assessment process.

Minerva's Renzo Dalla Via and Tony Pasteris reviewed some of the 2005 award submissions, and Tony was asked by NSC and Exxon Mobil to be one of two judges to visit the corporate offices of the two finalists and recommend the winner for the 2005 award.

See page 6 to obtain a case study about Noble. For more about the award, visit [www.campbellaward.org](http://www.campbellaward.org).

## Where We've Been



>> Ontario Minerva Committee Co-Chairs David Meston [shown above] and Len Hong spread the health and safety message to business school professors while manning a Minerva booth at this spring's Administrative Sciences Association of Canada (ASAC) Conference held in Toronto.

>> Minerva President David Halton has made presentations about Minerva to the board of the Canadian Society of Safety Engineering as well as to the Occupational Health and Safety Council of Ontario.

# NEW RESOURCES

## Case Studies & Modules

**Health and Safety in Mining** – Two case studies highlight a multiple fatality at INCO's Levack Mine in Sudbury to introduce students to the management of health and safety issues within a mining environment. The case studies, prepared at Laurentian University, describe INCO's operations in Sudbury, Levack Mine, the shaft accident and safety systems in use at the time. Part B discusses the management, union, political and regulatory response to the accident and explores the effective management of health and safety.

**Noble Corporation** – This case study documents how offshore drilling contractor Noble – winner of the 2004 Robert W. Campbell Award – demonstrates exceptional safety management leadership and met the criteria of the award, while making significant marketing and operational changes to enhance its business. The case is presented in a "here is the problem - what is the solution?" format.

**What/Why/How of SHE Management:** In partnership with the National Safety Council, Minerva Canada has developed three PowerPoint modules – the What/Why/How of Safety, Health and Environmental Management – designed to inspire senior executives to

implement these management systems. The modules are based on CEO interviews and incorporate concepts from the Noble case study. They are 20 minutes each and are ideal for use in CEO breakfast meetings or as an introductory session in business and engineering courses. They can be delivered as individual units or as a trilogy.

## More Case Studies

- Engineering Health and Safety Module and Case Studies
- Automotive Plastics Ltd.
- INCO Levack Mine
- Storey Energy Limited
- The National Rubber Company of Canada
- Cover-Shield Failure and Falling Incident at a Hydroelectric Generating Station

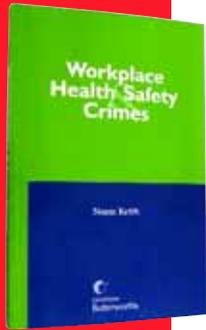
## Proceedings

- 2001 Minerva workshop on *Integrating Safety Management into the Curricula of Canadian Business Schools*

**TO ACCESS THE ABOVE AND OTHER RESOURCES, VISIT [WWW.MINERVACANADA.ORG](http://WWW.MINERVACANADA.ORG), OR CONTACT: DAVE MESTON AT RYERSON UNIVERSITY, 416.979.5000 EXT. 7083, E-MAIL [DMESTON@RYERSON.CA](mailto:DMESTON@RYERSON.CA)**

## RELATED RESOURCE

*Workplace Health and Safety Crimes*, by Norm Keith, B.A., LL.B., CRSP (LexisNexis Butterworths, April 2004): Through its section-by-section analysis of Bill C-45 (the "Westray Bill"), which establishes new legal duties regarding workplace health and safety, and a new offence of occupational health and safety (OHS) criminal negligence, this book provides the guidance necessary to avoid the potentially costly consequences of an organization becoming the subject of a criminal charge. Where the new legislation is unclear or ambiguous, the author also provides insight on how the provisions are likely to be interpreted.



## WELCOME ON BOARD

**David Halton**, President, joins Minerva with considerable experience in not-for-profit organizations, having served as Executive Director of technical, environmental and safety associations.

**Fergus Kerr**, Acting Director, Occupational Disease and Survivor Benefits Program, Workplace Safety & Insurance Board, Sudbury, Ontario, is a new board member

## ... AND HEARTFELT THANKS TO:

Retired board member Garry Thomson, General Manager, Industry Sectors, Workplace Safety & Insurance Board, Toronto, for his outstanding contributions to Minerva and for the outstanding support of WSIB.

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