

THE PROFESSIONAL



# EDGE

ISSUE 139, JULY/AUGUST 2012



Professional Liability

# REGISTER NOW

## for the party of the century!

Please join us in celebrating the

## COLLEGE OF ENGINEERING 100<sup>th</sup> ANNIVERSARY REUNION

**September 20th-23rd 2012**

The College of Engineering is celebrating its 100th anniversary in 2012 and you are invited to be a part of it!

There is a sense of pride as we reflect on the traditions of the first 100 years of the college. There is also a sense of excitement as we look to the future.

Please join us **September 20-23, 2012** for many opportunities to get together with old friends and see what's new at your college.

### REUNION HIGHLIGHTS

#### Class Parties

Go to [www.engr.usask.ca/100years/class.php](http://www.engr.usask.ca/100years/class.php) to find out who your Class Rep is, who else is coming, and make your plans to attend special activities organized for you and your group. Use the slider to select the year you graduated to skip to your class area.

#### Tour Circle Drive South Bridge Project Saturday, September 22, 2012

The Circle Drive South Project is the largest single project in the City's history at an estimated cost of \$272.5 million. You can be one of the first to get a close up look. **Sign up for this separately.**

#### Innovation Seminar Keynote Speaker

Steven Johnson is the best-selling author of seven books on the intersection of science, technology and personal experience. In his newest book, *Where Good Ideas Come From: The Natural History of Innovation*, Johnson identifies the seven key principles to the genesis of great ideas, and traces them across time and disciplines.

#### 100<sup>th</sup> Anniversary History Book

The College of Engineering 100th Anniversary History Book will be given to every alumnus who registers for the reunion. If you would like to order an extra copy or purchase one for someone who is not attending the reunion, you can call (306) 966-2633.

### REGISTRATION

Choose one of the following options:

#### 1. REGISTER AND PAY ONLINE

Go to [www.engr.usask.ca/100years](http://www.engr.usask.ca/100years) and click on **REGISTRATION FORM** in the menu on the left.

Fill in the required information, including credit card details (this is a secure website).

#### 2. REGISTER ONLINE & MAIL-IN YOUR PAYMENT

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Fill in the required information and choose the "pay by cheque" option. Mail your cheque to:

**College of Engineering – Dean's office  
University of Saskatchewan  
57 Campus Drive, Saskatoon, SK S7N 5A9**

#### 3. MAILED REGISTRATION FORM

Complete the registration form in this brochure, detach and mail to the address above.

**Register early and receive a free copy of *A Safe and Prosperous Future – 100 Years of Engineering and Geoscience Achievements in Saskatchewan* courtesy of APEGS. Limited number available.**

### CONTACT US

**Phone:** (306) 966-2633 **Email:** [engr.alumni@usask.ca](mailto:engr.alumni@usask.ca)

**For more information, check out our website:  
<http://www.engr.usask.ca/100Years/>**





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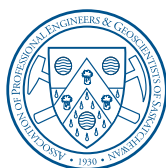
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It pays to advertise in *The Professional Edge*. You reach 5,000 P.Engs, P.Geos, Engineers-in-Training and Geoscientists-in-Training in Saskatchewan and 5,000 others outside Saskatchewan.

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### Submission Deadlines

SEPTEMBER/OCTOBER 2012: September 1, 2012 NOVEMBER/DECEMBER 2012: November 1, 2012

### Subscription Rates\*

Members and Licensees - Free. Others in Saskatchewan - \$12/year. Elsewhere - \$20/year.

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SUBMITTED BY CES

# President's Report



**“All members and holders of temporary licences shall recognize this code as a set of enduring principles guiding their conduct and way of life and shall conduct themselves in an honourable and ethical manner, upholding the values of truth, honesty and trustworthiness, and shall safeguard human life and welfare and the environment.”**

I think we all recognize this statement as the first words of the Code of Ethics, embedded within the *Engineering and Geoscience Professions Regulatory Bylaws*. Recent events in Saskatchewan remind us how important this statement is in the lives of all humanity, not just those of us living in Saskatchewan.

In February, the City of Prince Albert issued a boil water advisory as a result of problems within the potable water system. In June, as a result of high flows in the North Saskatchewan River, the City of Prince Albert chose to issue advisories and to take other steps to protect the drinking water supply in the community. It is not only in communities like Prince Albert that these advisories are being issued. The Government of Saskatchewan has also issued advisories for smaller communities when necessary. Even in the City of Saskatoon, restrictions have been placed on water use to allow the city to maintain adequate supplies in the massive reservoirs that provide a buffer between the average daily treatment and the peak water use.

While the steps taken by the city administration in Prince Albert, Saskatoon and other communities may have posed an inconvenience at the worst, they were important steps that were taken by engineers to “safeguard human life and welfare.”

And it's not just about water supply. In the City of Saskatoon, debate rages about the so-called “Saskatoon Beach” on the South Saskatchewan River just east of the Circle Drive Bridge. Engineers and city administration have warned people about the dangers of entering the river at this popular summertime hangout, especially when river levels are high and the currents are strong.

These are some simple examples of the commitment we make as professional engineers and geoscientists. Unfortunately, as professions, we rarely receive credit for our accomplishments. But we have so much to be proud of, and we need to get the word out. That is why I am delighted that Council has agreed to increase the funding for our promotional activities.

In the coming months, our Communications and Public Relations Committee, along with our communications consultants, will be working to develop a new communications plan to promote the engineering and geoscience professions in Saskatchewan. Many of our sister associations across the country are also looking with renewed interest at increasing the profile of our professions. At the Engineers Canada Annual Meeting in June, the opening plenary session was focused on this topic. We will work with our sister associations to raise the profile so that engineering and geoscience once again rank among the most respected professions that people recognize as contributing to the quality of life in Canada and globally.

This year, we have a fantastic opportunity to move forward with this initiative as the College of Engineering at the University of Saskatchewan celebrates its 100th anniversary. Celebrations will be

held from September 20-23, 2012 at various venues around campus and Saskatoon.

One of the highlights of the celebration will be the unveiling of a plaque commemorating the first Dean of the College of Engineering and the first President of the Association of Professional Engineers of Saskatchewan, Dr. C.J. MacKenzie. Appropriately, the plaque will be placed at the southwest end of the Broadway Bridge, a structure which Dean MacKenzie helped to design.

I would like to thank the Past Presidents of APEGS, along with the City of Saskatoon and the University of

Saskatchewan College of Engineering, who have all made contributions so that this dedication can happen.

In closing, I would like to encourage all members, in the province and around the globe, to come out this fall to help the college celebrate. In the meantime, I hope everyone has a chance to take some time to spend with family and friends now that summer has finally arrived in Saskatchewan.

Leon C. Botham, P.Eng.  
President

## Letter to the Editor



Dear Editor,

I was just browsing through *The Professional Edge* issue 138 and I saw the section reviewing some of the talks from the Annual Meeting. I have to say that I was really disappointed in the article covering the talk on international travel and data intelligence safety given by a CSIS representative. I attended that talk and I really enjoyed it. I think the presenter did a good job of covering the various ways that engineers and geoscientists can run into trouble when travelling abroad, especially if they possess company intel.

I don't think it was necessary to call him "pudgy" or "bland-looking." As well, the article claims "he refused to provide his name and got upset when someone tried to take his picture." He did in fact give his name at the beginning of the presentation. It was Travis. He didn't get upset when someone tried to take his picture; he just simply asked that his picture not be taken. If he is going to be faulted for that, I think that people need to realize he is working for the Canadian Security and Intelligence Service and therefore his job likely requires a certain amount of anonymity. I feel that to poke fun at someone for a very well-presented talk is very unprofessional.

Jenna Vanstone B. Sc., P.Geo.

*Thank you for your feedback on the article. You make good points. Some of the comments in the article had an intentionally tongue-in-cheek tone and we apologize if you found them offensive. His presentation was indeed very worthwhile and informative. - Editor*



# Mistakes Happen

## The Importance of Professional Liability Insurance

BY MARTIN CHARLTON COMMUNICATIONS

**D**oug Sanders, P.Eng. is a partner with the Borden Ladner Gervais law firm in BC and a professional engineer licensed with APEGS. He currently deals with contracts for large infrastructure and construction projects, but in the past he's defended architects and engineers from claims of civil liability.

He says the most common civil liability issues engineers and geoscientists see are breach of contract and negligence claims.

"Negligence from an engineering perspective would be something like errors or omissions in designs," he explained.

"Probably something like failing to deliver your services on time would be a reasonable sort of example of breach of contract claims."

Engineers and geoscientists should know the potential sources for civil liability and what their risks are so they can try to address those risks and avoid any problems.

"One of the things I try to impress upon people is that ultimately we can only do the best that we can do," said Sanders.

"There are a lot of engineers who go through their entire careers without encountering a single lawsuit or claim, but there are others who, for whatever reasons, see a number of lawsuits. In part, all you can do is your best from a professional perspective. If it turns out you made a mistake, that's when you want your insurance there to protect you."

All APEGS members in good standing are automatically enrolled in the National Secondary Professional Liability Insurance Program, which provides insurance for individual liability for professional services they provide. (See sidebar.) Maintaining professional liability insurance is essential, Sanders says.

"For the most part, people try to do their best, but there are a lot of pressures and frankly people make mistakes," said Sanders.

"That's why you maintain insurance. If your house is never going to burn down or you're never going to get into a car accident, you wouldn't buy insurance. But things happen and people make errors and that's ultimately what creates civil liability."

**All professionals are responsible for the work they do, even if - and perhaps especially if - something goes wrong.**





## Sins of Omission

Douglas Curliss, QC agrees with Sanders about pressures in the workplace.

“There are all kinds of pressures out there in the work place in one form or another,” said Curliss, Counsel, Public Prosecution Service of Canada, Saskatchewan regional office.

Unfortunately, sometimes these pressures lead not just to civil liability, but to criminal or quasi-criminal liability.

There are “at least dozens and maybe hundreds” of environmental regulations in Canada at the municipal, provincial, and federal levels, says Curliss. There are just as many laws on the health and safety side of criminal liability.

Some of those laws work the way we imagine most laws to work: they say you can’t do something. But other laws say you have a positive duty to do something - those laws are broken by omissions.

## Supervisors in particular need to know their responsibilities in this regard, says Curliss.

“Supervisors now have a greater liability for not doing things than they used to,” he said. “If the supervisor sees something happening, like an employee that’s about to do something dangerous... failing to act, failing to stop something from happening, is resulting in more and more criminal liability or quasi-criminal liability.”

## Curliss’s advice:

If you think something seems off, tell someone. Even if you’re just doing what someone else told you to do, you could still end up being guilty of criminal or quasi-criminal offences.

Clearly, professional liability insurance won’t protect you from facing a claim or lawsuit, but it will help with the financial hardship of such a situation. Employers often cover part of the expenses, but the National Secondary Professional Liability Insurance Program helps with additional expenses professionals are often required to pay as an individual.

## What’s APEGS Role?

Hopefully members will never see a civil liability or criminal liability case but if a member does what steps will APEGS take to help.

Technically, APEGS doesn’t handle civil liability or criminal liability cases, but if a member faces in such a case, it might be an indicator of professional misconduct or professional incompetence, which APEGS does deal with.

Members are bound by a code of ethics, explains Robert McDonald, P.Eng., APEGS director of membership and legal services. If you break that code, you may have your licence revoked.

One example of professional misconduct that McDonald cites working outside a members area of competence.

“I’m a chemical engineer, and you’d be surprised how many people phone the office and ask, ‘Are you a professional engineer? Can I bring my house plans down to your office and can you put your seal on it so I can get a building permit?’ Sorry, but I know nothing about structures.”

Professional incompetence will come as a result of a catastrophic failure, for example, if a building falls down, says McDonald. While still under investigation, a recent event that may come to mind for many is the collapse of the roof of the Algo Centre Mall in Elliot Lake, Ontario on June 23.



The APEGS system is complaints-based. If APEGS receives a complaint, it investigates it in a fair and objective fashion.

APEGS saw about five to 10 complaints per year and it generally holds one or two discipline hearings, though some years it has no hearings at all. Even though APEGS has a large and ever-growing number of members, it doesn't have a large number of complaints, McDonald says.

Although the system is complaints-based, if there is a catastrophic failure, APEGS will look into the issue, which is why it participated in the North Battleford water inquiry in 2001. A cryptosporidium bacterium outbreak was traced to the city's water treatment plant.

"It was a failure of an engineered system and 7,000 people got sick. From that perspective, we're looking to see who were the engineers involved," said McDonald.

Generally, no one sets out to deliberately violate the code of ethics or to create a poor design, says MacDonald. If something does go wrong, APEGS supports its members in every way it can, but first and foremost, its obligations are geared toward public safety and public interest.

APEGS proactively tries to keep members out of trouble through professional development and its law and ethics seminar, but it has no tolerance for members who are found to have deliberately broken the code of ethics.

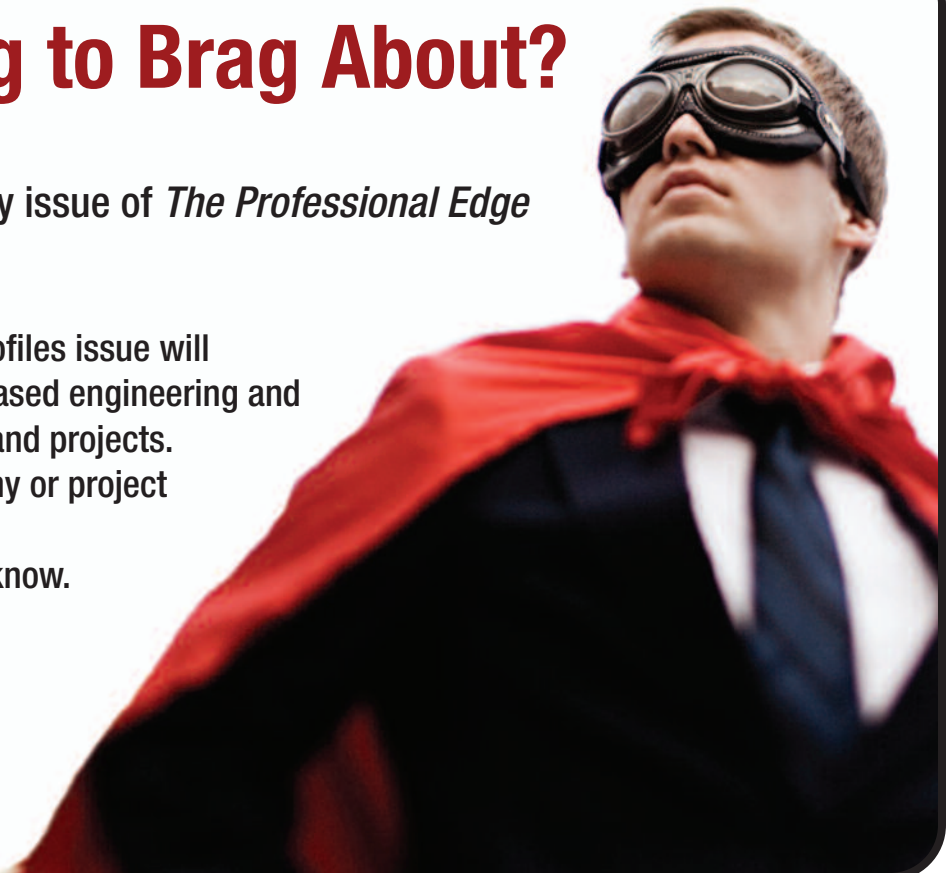
If you have any questions about the APEGS code of ethics or secondary professional liability insurance, please visit [apegs.sk.ca](http://apegs.sk.ca) or call 1-800-500-9547.

## Something to Brag About?

The January-February issue of *The Professional Edge* is all about you!

Our annual Company Profiles issue will profile Saskatchewan-based engineering and geoscience companies and projects. If you want your company or project profiled, or would like to recommend one, let us know.

Please contact:  
Professional Edge editor  
Lyle Hewitt @  
[lyle@martincharlton.ca](mailto:lyle@martincharlton.ca)



# Secondary Professional Liability Insurance Program

SUBMITTED BY HUB INTERNATIONAL

NOTE: *This information has been submitted by the insurance provider. APEGS does not provide advice, interpretation or endorsement on insurance matters.*

**APEGS, along with other provincial associations,** voted to make Secondary Professional Liability Insurance coverage available to its members. APEGS collects the required fee from its members as part of the annual membership registration.

The Secondary Professional Liability Insurance program provides cover to individual engineers and geoscientists. It does not cover firms, corporations, public entities or employers. These groups are expected to carry professional liability insurance for their businesses.

The Secondary Professional Liability Insurance coverage is meant to cover members and legal representatives of deceased members for their individual liability arising out of professional services for the following scenarios:

- When you are working at a non-consulting firm, you are not a decision maker of the firm, and you are performing professional services. Such as a university professor gives design advice or you design something for your employer who is a manufacturer.
- When you change employment there is coverage for your past professional services provided to the former firm if that firm no longer provides insurance protection to you. Some restrictions apply to decision makers.
- When an engineering or geoscience consulting firm ceases operation or goes bankrupt you will have personal coverage. Some restrictions apply to decision makers.
- When you retire, you have protection for past work. If you worked for an engineering or

geosciences firm cover is available only if the firms that you worked for in the past do not provide you with protection. Some restrictions apply to decision makers.

- When you provide consulting services outside of regular employment activities or while in retirement and the compensation that you receive for all projects is \$15,000 or less per calendar year.

Decision makers have some coverage under the Secondary Professional Liability Insurance coverage. A decision maker is defined as a director, officer or sole proprietor of an entity or any associate or shareholder who holds more than 10 per cent of the shares of the entity or shares issued that include voting rights of an entity. Coverage extends for the following scenarios:

- If you are a decision maker of a non-consulting firm or an entity that constructs, manufactures, installs, fabricates or engages in some other activity you are insured if you had a role as a designer in the product produced by the firm for claims related to the design of the product.
- If you were a decision maker of your former firm that ceased operations the policy provides coverage after a six-month waiting period following entry into receivership or bankruptcy of the firm or the policy provides coverage after a two-year period following the closure and cessation of operations of the consulting firm.

The Secondary Professional Liability Insurance provides \$100,000 per claim in coverage for damages plus defence costs. Coverage extends to members in training and it covers mentoring.

*Please refer to the policy wording for the limits, deductibles, terms and conditions.*

# Member Profile



This month *The Professional Edge* chats with Karla Mills, P.Eng., a geological engineer with Tetra Tech in Saskatoon.

## Tell us about your personal and professional background.

I was born in Guelph, Ontario and grew up in Winnipeg where I studied engineering at the University of Manitoba. After graduation I started my career with Wardrop (now Tetra Tech). I have been living in Saskatoon for the last two years but my career travels have been via Winnipeg, Saskatoon and Vancouver.

## Why did you choose to go into engineering?

I had an aptitude for math and science so a number of my teachers suggested that I look into engineering. I chose geological engineering because, growing up, I had a keen interest in environmental remediation and hydrogeology. Over the years my career has evolved into more project management roles with an emphasis on managing mine studies and design projects.

## What was your biggest challenge in university?

My biggest challenge and I suppose accomplishment is that I paid my way through most of my schooling. At times it was difficult trying to balance multiple jobs while still having a focus on my school work.

## What was your first job after university?

I've had a long relationship with Wardrop/Tetra Tech even before I left university. Wardrop provided me with my undergrad thesis topic - a contaminated site study. Upon completing the study Wardrop offered me a position with the company and I have been working there ever since.

## What do you feel was your single greatest accomplishment as an engineer?

I worked on a couple of projects in Uganda that involved environmental assessments of some sugar cane factories. I worked with a joint Canadian/Ugandan team of engineers and scientists to baseline the environmental state of the factories and surrounding areas prior to the government returning the facilities to the original owners. Not only was the work very satisfying but it also opened my eyes to life in that part of the world. Whenever you work in a country like that you can't help but come away feeling very fortunate to live in a country like Canada.

## What are your interests outside of work?

My husband and I have two small children who keep us very busy. When I have free time, I like to run. I also read a lot.

## What is your favourite vacation spot?

My husband and I just went to Hawaii in March and it immediately became my favourite holiday spot. We plan on going again soon and taking our children this time. We're an active family, so we enjoyed things like surfing and ziplining but Hawaii also offered a relaxed atmosphere that balanced out the holiday experience.

## Who has had the greatest influence on your life and career?

My dad had a big influence on both my life and career. He taught me to go after what I wanted in life and not allow other people's opinions discourage me. My father led by example: he was a paraplegic but never treated it as a handicap. He always went for what he wanted. He was a very motivating man.

When it comes to influencing my career, I also have a handful of big brothers here in Tetra Tech. When you grow up professionally in one company, you develop almost family-like connections. There are probably five main mentors here who have guided me along in my career.





# OCTOBER 17, 2012

*“People must know the past to understand the present, and to face the future.” ~Nellie McClung*

For more information, please visit:  
[www.reginawhm.ca](http://www.reginawhm.ca)

Please RSVP by October 15,  
2012  
[rsvp@reginawhm.ca](mailto:rsvp@reginawhm.ca)

**Wednesday, October 17, 2012**  
**Theatre Lobby**  
**Conexus Arts Centre**  
**200 Lakeshore Drive**  
**Regina, Saskatchewan**

Doors open at 6:45 p.m.  
Program Begins 7:15 p.m.

Light refreshments will be  
provided.  
There is no admission charge.

**APEGS is one of the  
many proud sponsors of  
the annual Women's  
History Month  
Celebration.**

**STRONG GIRLS, STRONG CANADA: LEADERS FROM THE START**



# Call for Nominations Awards

The Awards Committee is seeking nominations for the APEGs Awards as well as other provincial and national awards such as the Saskatchewan Order of Merit, the Order of Canada, the Canadian Engineers' Awards (Engineers Canada) and the Canadian Professional Geoscientist Award (Geoscientists Canada).

If you know of a professional engineer or professional geoscientist who should be considered for an award, or an exceptional engineering or geoscience project that should receive an award, the committee would like you to nominate that member or project. There are seven APEGs awards: the **Brian Eckel Distinguished Service Award**, the **Outstanding Achievement Award**, the **McCannel Award**, the **Promising Member Award**, the **Friend of the Professions Service Award**, the **Exceptional Engineering/Geoscience Project Award** and the **Environment Excellence Award**. Criteria for each of the awards are contained in the nomination form that appears on the next page.

In addition to the APEGs Awards, the Awards Committee nominates APEGs members for awards presented by both Engineers Canada and Geoscientists Canada. Nominations for awards must be received by November 30 to provide time for the Awards Committee to review and consider the nominations for the annual APEGs Awards and to prepare nomination packages for provincial and national awards. The Awards Committee will develop and maintain a list of nominees for consideration for the various awards.

Nomination form on following page.

**Please send nominations to:**

APEGs Awards Committee  
104, 2255, 13th Avenue, Regina, SK S4P 0V6  
Fax: (306) 525-0851 or Email: [apegs@apegs.sk.ca](mailto:apegs@apegs.sk.ca)







## EPIC Educational Program Innovations Center

## Upcoming Fall 2012 Courses

### CIVIL

- ☐ **Structural Engineering for Non-structural Engineers**  
September 24-27, 2012 • Winnipeg, MB • Code: 03-0910-2263  
The fee for the course is \$2,395 + GST. If you register after August 24, 2012 the fee increases to \$2,565 + GST.

### CONSTRUCTION

- ☐ **Foundations of Construction Law**  
September 19-20, 2012 • Regina, SK • Code: 03-1016-2263  
The fee for the course is \$1,295 + GST. If you register after August 17, 2012 the fee increases to \$1,465 + GST.
- ☐ **Avoiding Construction Overruns and the Resultant Construction Disputes**  
October 22-24, 2012 • Winnipeg, MB • Code: 03-1013-2263  
The fee for the course is \$1,795 + GST. If you register after September 21, 2012 the fee increases to \$1,965 + GST.

### ELECTRICAL

- ☐ **Motors and Variable Speed Drives**  
October 22-23, 2012 • Regina, SK • Code: 03-1036-2263  
The fee for the course is \$1,395 + GST. If you register after September 21, 2012 the fee increases to \$1,565 + GST.
- ☐ **Fire Alarm Systems: Design, Installation, Inspection and Testing**  
October 25-26, 2012 • Winnipeg, MB • Code: 03-1017-2263  
The fee for the course is \$1,295 + GST. If you register after September 21, 2012 the fee increases to \$1,465 + GST.
- ☐ **November 5-6, 2012 • Regina, SK • Code: 02-0423-2252**  
The fee for the course is \$1,295 + GST. If you register after October 5, 2012 the fee increases to \$1,465 + GST.

### CHEMICAL

- ☐ **Contaminated Soil and Groundwater Chemistry, Assessment and Remediation**  
October 3-5, 2012 • Regina, SK • Code: 03-1015-2263  
The fee for the course is \$1,795 + GST. If you register after August 31, 2012 the fee increases to \$1,965 + GST.

### MECHANICAL

- ☐ **Process Piping Systems**  
September 19-21, 2012 • Regina, SK • Code: 03-0909-2263  
The fee for the course is \$1,795 + GST. If you register after August 17, 2012 the fee increases to \$1,965 + GST.
- ☐ **Understanding Industrial Codes, PART 1 – ASME Section 8 (Pressure Vessels) and Section 5 (Non-Destructive Examination)**  
October 1-2, 2012 • Saskatoon, SK • Code: 03-1013-2263  
The fee for the course is \$1,395 + GST. If you register after August 31, 2012 the fee increases to \$1,565 + GST.
- ☐ **Boilers, Boiler Controls, Combustion and Steam System Efficiency**  
October 1-4, 2012 • Winnipeg, MB • Code: 03-1014-2263  
The fee for the course is \$2,395 + GST. If you register after August 31, 2012 the fee increases to \$2,565 + GST.
- ☐ **Fundamentals, Sizing, Selection, and Operation of HVAC Systems**  
November 12-14, 2012 • Winnipeg, MB • Code: 03-1107-2263  
The fee for the course is \$1,795 + GST. If you register after October 12, 2012 the fee increases to \$1,965 + GST.

### 5 EASY WAYS TO REGISTER

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2. Mail: EPIC Learning Center: 5670 McAdam Rd., Mississauga, ON L4Z 1T2    5. Online: [www.epic-edu.com](http://www.epic-edu.com)



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Registration covers all program materials, refreshments during breaks and lunch but excludes accommodation. For organizations sending more than one participant, the following discounts to the course fee apply: 10% discount to the second, 15% to the third, 20% to the fourth and 25% to the fifth and subsequent registrations.

To withdraw from a course, you must send your request in writing with the official receipt to our office:

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- Five to fourteen business days in advance: non-refundable credit of equal value for any future EPIC seminar within one year. Credits are transferable within your organization.

In case of an unexpected event occurring after this time, you may send someone else to take your place without any additional cost. If a speaker is not available due to unforeseen circumstances, another speaker of equal ability will be substituted. EPIC reserves the right to cancel or change the date or location of its events. EPIC's responsibility will, under no circumstances, exceed the amount of the fee collected. EPIC is not responsible for the purchase of non-refundable travel arrangements or accommodation or any associated cancellation/ change fees. To avoid any fees or charges, please call to confirm that the course is running before confirming travel arrangements and accommodations.

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Position \_\_\_\_\_  
Company/Organization \_\_\_\_\_ Nature of Business \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Postal Code \_\_\_\_\_  
Tel. (Office) \_\_\_\_\_ Tel. (Residence) \_\_\_\_\_  
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Certified/Company Cheque or Money Order# \_\_\_\_\_

(Payable to EPIC Educational Program Innovations Center) Purchase order # \_\_\_\_\_

Purchase orders must be received in advance of the course

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Tel./Email: \_\_\_\_\_

Charge to: ☐ Visa ☐ MC ☐ AMEX

Card Number \_\_\_\_\_ EXP. Date \_\_\_\_\_

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# EPIC EDUCATIONAL PROGRAM INNOVATIONS CENTER

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## OPTIONAL INFORMATION:

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I Graduated in the Year: \_\_\_\_\_

### Electrical

- ☐ Lighting Design
- ☐ Motors & Drives
- ☐ Instrumentation & Control Systems
- ☐ Electrical Design
- ☐ Power Systems
- ☐ Codes & Standards
- ☐ Electrical Installation/Construction
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- ☐ Dykes & Dams
- ☐ Foundations & Soils
- ☐ Highways
- ☐ Structural Design
- ☐ Water Distribution
- ☐ Sewer Design & Maintenance
- ☐ Tunnels
- ☐ Steel Fabrication
- ☐ Roofing
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- ☐ Natural Gas Technologies
- ☐ Refining
- ☐ Oil & Gas Field Services
- ☐ Pipelines





**Save the Date!**

## **A Continuing Professional Excellence Opportunity**

Temple Gardens Spa, Moose Jaw, November 1 and 2, 2012

The APEGS Professional Development Committee is pleased to offer a fall Continuing Professional Excellence opportunity for engineers and geoscientists. Check the APEGS website for updates and registration information: [www.apegs.sk.ca](http://www.apegs.sk.ca).



### **Session One**

#### **Get to the Point! A Two-Day Practical Writing Course for Technical Professionals**

This highly interactive two-day session is designed for engineers and geoscientists who write reports, emails, letters and proposals, and want to write them more efficiently and present their information more effectively. Sharpen your personal writing style to create a strong and effective presence. There will be individual and group practice exercises, with lots of discussion and feedback.



### **Session Two**

#### **Infrastructure Climate Risk Assessment – Tools and Processes**

This full-day session will be of interest to engineers and geoscientists who are involved in the pre-design, design, operation, maintenance and management of infrastructure and who, now and in the future, need to consider climate change for these activities, for new infrastructure or for rehabilitating or retrofitting existing infrastructure. Engineers Canada, in partnership with Natural Resources Canada, has developed and tested the PIEVC Engineering Protocol. This protocol is a structured procedure using standard risk assessment methods to assess and document infrastructure's vulnerability to future climate change impacts.



### **Session Three**

#### **Saskatchewan Environmental Code - Saskatchewan Ministry of Environment**

The new Saskatchewan Environmental Code is a key component of the Ministry of Environment's move to a results-based regulatory model which will enhance environmental protection while encouraging innovation. The new model represents a significant shift away from prescriptive legislation and regulations to a focus on holding proponents accountable for achieving desired environmental outcomes. The Code has been developed by numerous stakeholders and ministry officials and has gone through a comprehensive public consultation process. This half-day session will provide an overview of the features of the Saskatchewan Environmental Code and its chapters including topics of interest such as the requirements of "Qualified Persons" and provision for "Alternative Solutions."

### **Current Environmental Issues**

This half-day session will comprise of presentations from industry leaders on current environmental issues and challenges (topics to be determined).



## APEGS View



RES President Greg Stephenson, P.Eng., presides over the RES AGM

The Regina Engineering Society (RES) held its annual golf tournament, barbecue and Annual General Meeting at the Murray Golf Course in Regina on Friday June 8, 2012. The event was open to all RES members, engineers, family and guests. Member support is critical for any event and the RES executive heartily thanks all members, friends and colleagues who attended.

The goal of the Regina Engineering Society is to promote the objectives and interests of the engineering profession in the Regina area.

### *In Memoriam*

John S. Dudar, P.Eng.  
John M. MacPherson, P.Eng.  
James N. Wilson, P.Eng.

## Council Notes

April 12 and 13, 2012

Hotel Saskatchewan  
Regina SK

### 14 of 19 Councillors present

- Council approved Life Membership for Rollie Robert, P.Eng. and Jacob M. Wise, P.Eng.
- Council appointed Kristin Bogdan, P.Geo. as Chair of the Connection and Involvement Committee for a two-year term ending after the first meeting of the Committee following the 2014 APEGS Annual Meeting.
- Council approved the New Grant Formula, the Constituent Reporting Structure and the Reserve Grant Fund as proposed by the Connection and Involvement Committee, all to take effect in 2013.
- Council was advised that the Equity and Diversity Committee has taken on a large role in bringing the Canadian Coalition of Women in Engineering, Science, Trades and Technology (CCWESTT) biannual meeting to Regina in 2014.
- Council was advised that Kate Grapes-Yeo, P.Geo. is the new Vice-Chair of the K-12 Committee.
- Council endorsed the nomination of Greg Vogelsang, P.Eng., P.Geo. for the position of President-Elect of Geoscientists Canada.



## RCE recognition event a success

The Saskatchewan Regional Centre for Excellence on Education for Sustainable Development (RCE) held its fourth annual Recognition Event on June 7, 2012, at the Wascana Centre in Regina. RCE celebrated the significant accomplishments of 22 groups. Not only did the recognition event demonstrate outstanding ways that groups in the province are excelling in sustainable initiatives but it also provided a place for relationship-building between organizations.

The 2012 RCE Recognition Event was financially sponsored by APEGS, the SIAST Green Group, SaskWater, SaskEnergy, the City of Regina, Conexus Credit Union, Co-operators Life Insurance and the School of Environment and Sustainability at the University of Saskatchewan.

# Consulting Engineers of Saskatchewan

## Consulting Engineers of Saskatchewan AGM and Golf Tournament

The Consulting Engineers of Saskatchewan (CES) hosted a strong representation of members at the Annual General Meeting and Golf Tournament at the Harbor Golf Club and Resort in Elbow, SK on June 1, 2012.



CES 2011-2012 Chair David Tratch, P. Eng. passes the gavel to 2012-2013 Chair Mel Leu, P. Eng. at the association's June 1 Annual Meeting in Elbow, SK.

## Golf Tournament

CES would like to acknowledge and thank this year's major golf tournament sponsors. Their generous contributions ensure the success of this annual event.



CES 2012 Annual Golf Tournament Winners: Lowest Score @ 63 Bullée Consulting Ltd. (l to r): Glen Gillis, P. Eng., Tim Magus, P. Eng., Kevin Cudmore, P. Eng., Lawrence Lukey, P. Eng., CES Chair Mel Leu, P. Eng.

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# Consulting Engineers of Saskatchewan Growth Reflects Growth of Provincial Economy

**T**he Consulting Engineers of Saskatchewan hosted a strong representation of members at its annual general meeting in Elbow, SK on June 1, 2012.

Outgoing Chair David Tratch acknowledged provincial economic development and growth has pushed the development and growth of the consulting engineering and geoscience industry in Saskatchewan.

Tratch highlighted the accomplishments of the board, the committees and CES staff during his 2011-2012 tenure.

“CES has made a concerted effort to provide increased services to our members” he said. “I have been involved at the Board level for four years and I continue to be amazed and impressed by the depth and variety of initiatives undertaken by the organization.”

“A sense of pride is stirred when professionals from otherwise competing firms work together to achieve a common goal for the benefit of all consulting engineers and geoscientists,” Tratch added.

Over the past year CES has been actively focusing on clients’ needs as its member firms continue to strengthen relationships with many public and private sector clients.

Mel Leu, CES 2012-2013 Chair, sees the upcoming year as an opportunity to help its members respond to the province’s continued economic growth.

“CES will actively seek member engagement through one-on-one conversations. Their input will enable us to capitalize on our members’ knowledge base and help us drive CES’s strategic objectives,” said Leu.

CES is a non-profit association representing the business interests of the majority of consulting engineering and consulting geoscience firms in Saskatchewan. As the business voice of the consulting engineering and geoscience industry in Saskatchewan, CES is the link between private industry, government, purchasers, decision makers and owners.

## The Consulting Engineers of Saskatchewan introduces its 2012-2013 Board of Directors



Mel Leu, P.Eng.  
Chair



Greg Wagner, P.Eng.  
Vice Chair



Tara Reichert, P.Eng.  
Secretary/Treasurer



David Tratch, P.Eng.  
Past Chair



Jason Mewis, P.Eng.  
Director and ACEC Liaison



Stormy Holmes, P.Eng.  
Director



Andrew Loken, P.Eng.  
APEGS Liaison



Marvin Loewen  
Engineering Licensee, PMP  
Director



Bland Brown, P.Eng.  
Associate Member



Geoff Sarazin, P.Eng.  
Young Professional Liaison

CES: the business voice of consulting engineers and geoscience in Saskatchewan



# News Beyond Our Borders



University of Manitoba

## U of M promotes Bioengineering

The University of Manitoba is promoting its Biosystems Engineering program which emphasizes the application of engineering principles to biologically-based systems (i.e., systems that include plants, animals, micro-organisms, or humans).

The program gives engineering students knowledge of biological concepts to enable them to work with health, environmental and biological science professionals when solving engineering problems involving biological systems.

The Department of Biosystems Engineering at the University of Manitoba offers five specializations: agricultural, biomedical, bioprocessing, environmental, and sustainable building systems.

Research projects and facilities in the department include an alternative energy village, a biofuels, biotechnology and fermentation lab, a grain storage research lab and a waste management lab, among others.

*Source: Association of Professional Engineers and Geoscientists of Manitoba*

## OIQ says “OUI” to bill for review of Engineers Act

The Ordre des ingénieurs du Québec (OIQ) expressed satisfaction with the bill tabled in May in the National Assembly calling for a review of the *Engineers Act*.

“The tabling of this bill is a major step in the process that the OIQ has given its full attention in the last few years,” stated Maud Cohen, Eng., President of the Ordre des ingénieurs du Québec.

The OIQ feels that the current version of the Act, whose wording is over 50 years old, does not reflect changes in scientific knowledge or new fields of engineering practice such as aerospace, software, biomedical, environmental, automated production and logistical operations engineering.

“To provide the OIQ with the tools it needs to fulfill its mission of protecting the public, it is now more important than ever before that the Act be adapted to the way engineering is now practised and that the knowledge and skills of the engineers who work in these fields of practice meet the requirements of the Act,” Cohen said.

The Ordre des ingénieurs du Québec also welcomes the minister’s desire to introduce measures that would make it mandatory for engineers to monitor engineering works. The OIQ maintains that direct monitoring of engineering works is one of the keys to restoring public trust, which has been shaken due to a number of infrastructure scandals in Quebec.

*Source: Ordre des ingénieurs du Québec*

## Albertans hold professions in high regard

Alberta engineers and geoscientists scored well when compared to other self-regulated professionals, a survey in late 2011 by Ipsos Reid suggests.

Seventy-six per cent of public respondents felt P.Eng.’s had the same or greater credibility than other self-regulated professionals — a 10 per cent increase from 2006. In the same rating, P.Geo.’s increased 11 per cent to 61 per cent. And P.Geoph.’s also fared well, with an eight per cent increase to 59 per cent.

Unfortunately, the survey reveals an across-the board decline in the perception of prestige associated with professionals in engineering and geoscience when compared to other self-regulated professionals. A majority of the public agrees that P.Eng.’s, P.Geo.’s and P.Geoph.’s provide benefit to Albertans. While there was a statistically significant decline in this level for P.Eng.’s (down six per cent to 70 per cent), the geoscience professionals remained steady and above 50 per cent.

One disappointing decline was in the number of respondents who felt that the association encourages women to consider careers in engineering and geoscience. Despite the implementation of out-

reach initiatives specifically directed at girls and young women, only a third of respondents were aware of this work. This is down from 2006 when 41 per cent of respondents agreed that the association encourages women to consider careers in engineering and geoscience.

Unfortunately, awareness of the P.Eng., P.Geol. and P.Geoph. designations continues to be low. One in every four Albertans is able to specify the P.Eng. designation. This drops to just two per cent for P.Geol. and one per cent for P.Geoph.

*Source: Association of Professional Engineers and Geoscientists of Alberta*

## New sheriff in town in Newfoundland

Newfoundland, like Saskatchewan, is enjoying a jump in engineering and geoscience work spurred primarily by the commodity sector. The membership of Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL) has grown significantly over the last couple of years and is expected to continue to grow for the foreseeable future.

There as here, this results in many professional engineers and geoscientists from other jurisdictions working on Newfoundland projects from their home base. This should trigger registration and permit requirements but those requirements aren't always observed. This requires considerable monitoring and follow-up to ensure that these professionals are aware of the need to comply with local requirements.

PEGNL has therefore hired a new Compliance Officer. Melissa Uhlman joined the PEGNL team in March 2012. The role of the Compliance Officer is new at PEGNL and reflects the need to inform its members and the public about the importance and requirement of compliance.

*Source: Professional Engineers and Geoscientists of Newfoundland and Labrador*

## Study: Female students less comfortable with the engineering workplace

Why don't more women enter the male-dominated profession of engineering? Some observers have speculated it may be due to the difficulties of balancing a demanding career with family life. Other have suggested that women may not rate their own technical skills highly enough.

However, a recent paper co-authored by MIT social scientist Susan Silbey, based on a four-year study of female engineering students, offers a different story. Contrary to the stereotype, the study finds, women are no more hesitant than men when it comes to mixing family and work.



Moreover, their self-assessments of their math skills do not predict whether they will stick with engineering. Instead, the study finds, women feel less comfortable in engineering than men, and lack the “professional role confidence” that male engineers seem to acquire easily.

“The further they get from the classroom, the more women don’t like the experience,” says Silbey, the Leon and Anne Goldberg Professor of Humanities and professor of sociology and anthropology at MIT.

“They find there is too large a gap between the idea of being an engineer and the practice of it.”

Women who have internships or jobs, she explains, find they “are too often relegated to female roles of note-taker organizer or manager,” and “don’t think they want to do this kind of work.”

In the study, a team of researchers tracked the progress of 720 students – more than 300 of them in engineering programs – between 2003 and 2007 at four institutions in Massachusetts.

The critical factor shaping the decisions of women was their perception of the engineering workplace. Some women in the study arrived at this view through bad experiences in engineering internships.

“The people whom I worked with don’t take me seriously. Not everyone does this, but a fair amount of the older men in my working environment do this. They’ll treat me like I know nothing and I’m only working... because my dad works here. What they don’t know is that I have a 3.7 GPA and am practically acing all of my engineering classes,” one student said.

As a result, the paper notes, many women find it difficult to “bear the burden of proving to others that despite gendered expectations, they are skilled engineers,” and seek other professional disciplines.

*Source: Association of Professional Engineers of Prince Edward Island*

# News From The Field



## Geologists pitched on ag studies

CBC - A campaign is under way to tell young people they should consider a career in agriculture.

At the Farm Progress Show in June in Regina, Farm Credit Canada launched its Agriculture More Than Ever campaign.

The company describes it as a multi-year initiative to change perceptions about agriculture. FCC notes that even those who leave the farm can still get a good job in the agri-food industry.

Such ideal candidates include Amanda Schoenroth, 23, who is now working toward her degree in geology — but grew up on a farm and is thinking about how higher education could keep her in the industry.

“I could potentially do soil analysis and soil tests . . . which is important to any farm industry, especially if you work for a fertilizer company,” she said.

FCC says the agri-food industry also has marketing and business jobs to offer young people, due to Canada’s growing international trade.

## Sask invention snares noisy vehicles

*Saskatoon StarPhoenix* - The City of Saskatoon is asking the provincial government for a change in legislation that would allow police to use photo radar technology to ticket loud vehicles.

The so-called Noise Snare technology under consideration measures Noise Levels from passing vehicles and—like photo radar—videotapes those that exceed a certain decibel limit.

Calgary recently became the first Canadian city to implement Noise Snare technology. Saskatoon’s city solicitor will report back by December on Calgary’s success in prosecuting, using video from the Noise Snare device.

The Noise Snare invention has a Saskatchewan connection. An electrical engineering student conceived of the idea while living in Saskatoon’s Sutherland neighbourhood in 2001. The motivation came after an ear-splitting sport bike woke up his daughter.

The Noise Snare can be mounted on a vehicle parked on the side of a road and can nab offenders as they thunder by. In Calgary’s case, it will be administered by bylaw enforcement officers and record video to DVD with stereo sound of any vehicle breaking the decibel threshold.

## Huskie Motorsports looks for winning formula

*Saskatoon StarPhoenix* - Ryan Tomiyama’s dream job upon graduation, he admits, would be to work for a big-time Formula One racing team. He knows where to find the proverbial checkered flag.

“Where they look for engineers for any of the motorsport competitions is through Formula SAE (Formula Society of Automotive Engineers),” Tomiyama, a third-year mechanical engineering student at the University of Saskatchewan, said.

Tomiyama is president of Huskie Motorsports at the U of S. He is just one of 21 team members who travelled to Nebraska in June for the international Formula SAE Student Design Series.

Before the trip, Huskie Motorsports unveiled S8, an open-wheeled race car which will compete against race car design teams from the United States, Brazil, Japan, Mexico, India, Canada and others.

This marks the sixth consecutive competition attended by the U of S club, which made its debut in 1999. The best showing by the team was 36th overall in 2009. The squad placed 37th in 2011.

The concept behind Formula SAE is that a fictional manufacturing company has contracted a design team to develop a small F1-style race car. The prototype race car is to be evaluated for its potential as a production item. The target marketing group for the race car is the non-professional weekend autocross racer. Each student team designs, builds and tests a prototype based on a series of rules.



Formula SAE promotes engineering careers as it encompasses all aspects of the automotive industry including research, design, manufacturing, testing, developing, marketing, management and finances. Formula SAE takes students out of the classroom, allowing them to apply textbook theories to real-work experiences.

Most U of S racing team members are mechanical engineering students, but there is also representation from arts and science and the Edwards School of Business. Some of the members have a kart racing background. One of them has dabbled in drag racing at Saskatchewan International Speedway.

## URANIUM AND NUCLEAR

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### More about nuclear waste plans

*Meadow Lake Progress* - Two communities in northwestern Saskatchewan heard more about how they could be affected if one of them is chosen as the permanent storage site for Canada's nuclear waste.

Officials from the Nuclear Waste Management Organization (NWMO) held open houses in Patuanak and Pinehouse to inform residents about the project to build a deep geological repository for Canada's nuclear waste.

Thousands of jobs would be created over the life of the project, many of them highly skilled. But the project would also require the shipment, most likely by truck, of thousands of containers carrying highly radioactive spent fuel through northwestern Saskatchewan to one of these communities north of Beauval.

The proposal has divided local residents and officials between those who believe it will provide economic benefits and those concerned about the risks of bringing hazardous substances for permanent storage deep underground near their communities.

Nuclear waste may not start to move until 2035 or later. The process of selecting a suitable location could take nearly a decade, followed by many more years of design, construction and testing.

NWMO hopes to find an "informed and willing" community to host the repository in one of Canada's four nuclear provinces (nuclear-power generating provinces Ontario, Quebec and New Brunswick and uranium producer Saskatchewan).

### WiN (Women in Nuclear) launches SK chapter

*Canada Newswire* - The Honourable Rona Ambrose, Minister

of Public Works and Government Services and Minister for Status of Women, congratulated WiN-Canada on the launch of its Saskatchewan chapter, WiN-Saskatchewan.

"Women are increasingly accessing new opportunities in non-traditional fields, opening doors for others to follow and excelling at the challenges of leadership," said Minister Ambrose. "Women play a key role in Canada's economic prosperity. By promoting networking and leadership development, WiN-Canada is strengthening the economy in Saskatchewan and across Canada."

In conjunction with the chapter's launch and together with Women in Mining, WiN-Saskatchewan hosted a networking opportunity for women in nuclear medicine, academia and science to officially announce the launching of the Saskatchewan chapter of WiN.

WiN is a world-wide association of women working professionally in various fields of nuclear energy and radiation applications. WiN-Canada also works to provide opportunities for women to succeed in the industry through a range of initiatives, including mentoring, networking and personal development opportunities.

### Nuclear giant Areva begins expansion

*The Canadian Press* - French nuclear giant Areva says it has started the first phase of construction to expand its McClean Lake uranium mill in northern Saskatchewan.

Areva and its partners are investing \$150 million to upgrade the mill and increase its capacity.

The upgrade is being done so that the mill can process uranium ore from the Cigar Lake mine slated to begin production late next year.

The work includes construction of a storage facility for yellowcake, the powder that is an intermediate step in the processing of uranium ores.

Areva says in a news release that primary construction at McClean Lake, which includes expansion of solvent extraction and acid plants, is to begin next June.

Areva says it expects to hire more than 100 new employees for the projects by the end of next year.

## UNIVERSITIES AND RESEARCH

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### SRC brings handsome return on investment

*Saskatoon StarPhoenix* - For every dollar invested in the Saskatchewan Research Council (SRC) in the past year the entity provided a 36-times return, according to the SRC's economic impact results for the 2011-12 fiscal year.



Saskatchewan Research Council

That translated into more than \$656 million in direct economic benefits to the province — the largest impact SRC has made since initiating this tracking method nine years ago, the report said.

The government-owned SRC is a provider of applied research, development and demonstration and technology commercialization.

Adopting some of the same principles as a financial audit, the SRC selects a basket of projects it is involved in and takes an in-depth look at the contributions. The organization talks to clients to see if and how the SRC's work has helped them. To factor for errors, it makes the best extrapolation it can and then typically only claims about 15 per cent of that in order to make a highly conservative estimate.

#### Highlights from SRC's 2011-12 activities include:

- More than \$53 million in projects aimed at creating positive environmental and/or social impacts were undertaken.
- SRC's work contributed to at least 22,343 tonnes of greenhouse gas emissions reduction/prevention and energy savings in excess of 43 million kWh/year.
- Since 2003, SRC has measured \$4.4 billion in combined economic and job impacts in Saskatchewan. In comparing the figures from 2003 to 2012, the economic impact numbers have tripled.

### Robot dairy barn under way at U of S

*Saskatoon StarPhoenix* - A new research facility is under construction at the University of Saskatchewan in Saskatoon. The facility will include a new dairy barn with both robotic and traditional milking capabilities, cattle

housing and feed research areas, milk storage and support rooms, staff and visitor spaces, and a public viewing gallery.

The new barn will serve the needs of the colleges of Agriculture and Bioresources, Veterinary Medicine and Engineering as well as VIDO.

The new barn will be about 100 metres long by 20 metres wide and will house 100 lactating cows. It will be L-shaped with a gallery at the front and will have ample light on both sides of the main barn.

Louvres, which are basically open spaces in the walls, will promote the natural flow of air and cross ventilation throughout the facility. The roof will be ventilated as well. The whole system will be hooked up to sensors which will sense the temperature inside and outside of the facility. A computer will operate the louvres which are inflatable and will close off during cold weather. It will be a naturally ventilated facility.

The barn will feature two milking systems, a traditional one and a robotic system. The automated system milks cows on demand. The cows will walk up to the milker and then they get milked by the robot.

Another attraction of the new dairy facility will be the public gallery. This will encompass over 1,000 square metres of display space showing the wide range of agricultural inputs used for making animal feed and how these produce milk in dairy cattle resulting in milk, cheese, yogurt and other products.

The future of the original 102 year-old barn is uncertain. It may be torn down as the building has been declared unsafe.

### Small volcanic eruptions could cool climate

*The Canadian Press* - An international team led by University of Saskatchewan researchers says small volcanic eruptions could cool the climate.

The team says aerosols — minute droplets of sulphuric acid — from relatively small volcanic bursts can be shot into the high atmosphere by weather systems such as monsoons.

Adam Bourassa, P.Eng., who is with the university's Institute of Space and Atmospheric Studies, said that until now it was thought that a massive eruption was needed to inject aerosols past the troposphere, the turbulent atmospheric layer closest to the Earth, into the stable layers of the stratosphere higher up.

Researchers noted that the massive eruption of Mount Pinatubo in the Philippines in 1991 temporarily dropped temperatures by half a degree Celsius worldwide.

The team, including scientists from Rutgers University in New Jersey, the National Center for Atmospheric Research in Colorado and the University of Wyoming,

looked at the June 2011 eruption of the Nabro volcano in Eritrea in northeast Africa. The findings appear in Friday's issue of the journal *Science*.

The researchers found that wind carried the debris from the volcano into the path of the annual Asian summer monsoon.

Researchers say they hope the findings will allow more accurate models of climate behaviour.

## MINING

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### First new SK potash mine in 40 years

*Ag Professional* - The first new potash mine in Saskatchewan in 40 years is now being built by K+S Group of Kassel, Germany. The company last built a new potash mine in the province in the 1970s. The \$3.25 billion mine is being built near Bethune.

The new mine is projected to produce 2.86 million tons annually of potash. The first production is anticipated to begin in 2015. Eventually, the mine could be expanded to produce four million tons of capacity.



www.leaderpost.com

### Potash glut forecast by bank

*The Canadian Press* - Global supplies of potash could outstrip demand by between 59–100 per cent by the end of the decade, a research report from the European bank Rabobank warned.

The bank said the North American potash consortium Canpotex and its European counterpart, BPC, will not sit idly by while rivals bring on additional supplies.

But Rabobank said a key variable will be the degree to which Brazil, India and China are prepared to endure uneconomic projects - either in their own countries or through investments abroad - to meet their own needs. Collectively, the three countries account for about 40 per cent of the world's potash imports.

"In the end, it is mainly geopolitical and long-term strategic security parameters that justify such investments," Rabobank analyst Dirk Jan Kennes said in a statement.

"From a pure economics angle, many of these investments might render losses if prices come under pressure due to oversupply."

Jac Nasser, chairman of BHP Billiton, recently hinted that the largest mining company in the world was scaling back its \$80 billion spending bonanza.

As a result the market now expects that BHP will unveil the scaling back or delay in some projects over the next few months. This is a situation likely to be repeated across the globe.

## OIL AND GAS

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### Sask sloppy with pipelines, auditor says

*The Canadian Press* - Saskatchewan's auditor says the government is not doing enough to police the spider web of pipelines criss-crossing the province and that could be putting the environment at risk.

Provincial auditor Bonnie Lysyk said in a report that the Ministry of Energy and Resources doesn't have effective ways to ensure pipeline operators follow The Pipelines Act and other regulations.

For starters, Lysyk said, there should be more on site inspections and pressure tests when pipelines are being built.

She said another problem is that the ministry doesn't have a framework to monitor compliance once a pipeline has been constructed.

"It does not request copies of integrity, safety or risk management processes used by pipeline operators. Without requesting and subsequently assessing this information, Energy and Resources will not know if pipeline operators properly maintain the pipelines or if a pipeline operator could adequately respond to an emergency event," Lysyk wrote.

Failure to follow regulations could harm people or the environment, she added.

Energy and Resources regulates more than 1,700 licensed pipelines, as well as 300 pipelines that are allowed by permit or were exempted under old provisions. These pipelines span 23,500 kilometres.

The auditor's report noted there haven't been any significant spills in recent years but said the number of





minor spills has slightly increased over the last four years. Just under 250 spills were reported in 2011.

The auditor also pointed out that one-quarter of all pipelines are more than 40 years old.

The auditor also noted that the law currently exempts Energy and Resources from regulating the construction of flowlines — the smaller, shorter pipelines that connect a wellhead to a storage facility. The ministry estimates there are 68,000 flowlines with as many as 4,000 more being added each year.

## Reports vary on fracking quakes

*Today's Energy Solutions magazine* - The controversial practice of hydraulic fracturing to extract natural gas does not pose a high risk for triggering earthquakes large enough to feel, according to a major US government science report.

The study was undertaken by the National Research Council (NRC), part of the National Academy of Sciences, a private non-profit institution that provides expert advice to the government. The study shows that, in more than 90 years of monitoring, human activity has been shown to trigger only 154 quakes, most of them moderate or small. That's compared to a global average of about 14,450 earthquakes of magnitude 4.0 or greater every year, said the report.

Most of the man-made quakes are caused by conventional gas and oil drilling, damming rivers, deep injections of wastewater and purposeful flooding. Only two worldwide instances of shaking - a magnitude 2.8 tremor in Oklahoma and a 2.3 magnitude shaking in England - can be attributed to hydraulic fracturing, a specific method of extracting gas by injection of fluids sometimes called fracking, the report said.

However, the US Geological Survey (USGS) seismologists have stated that the report is based on outdated data. Since the NRC started its study, government geologists have noticed a strange increase in earthquakes that seem man-made. At a professional seismology conference in April, the USGS presented a report on a sixfold increase in man-made quakes. This report pointed to induced quakes of magnitude four or larger in the past year in Texas, Oklahoma, Arkansas, Colorado, New Mexico and Ohio but said much of this happened too late for the NRC study.

Authors of the NRC report say it is still too early to tell whether those recent quakes would have changed the report's conclusions.

Although the USGS believes that the recent spate of man-made quakes is almost all related to wastewater injection, the USGS agrees with the NRC that hydraulic fracturing does not seem to pose much risk for earthquake activity.

If the country starts capturing carbon dioxide from coal power plants and injecting it underground, there is a potential for larger quakes given the amount of the heat-trapping gas that would have to be buried, the council's report said. That's an issue that needs more study, it said.

## ENERGY

### Go slow on new coal rules say enviro politicians

*The Canadian Press* - Saskatchewan and Ottawa are negotiating an agreement on greenhouse gas regulations for coal-fired electricity.

The federal government says it will stand down its regulations as long as the province's regulations achieve equal or better results.

Federal Environment Minister Peter Kent said the government remains committed to addressing climate change and an agreement will simply avoid duplication so the industry does not face two sets of regulations.

"We remain focused on our mutual goal of reducing greenhouse gas emissions from coal-fired electricity but want to ensure that Saskatchewan has the flexibility to choose the approach that best suits its circumstances," Kent said.

Saskatchewan Environment Minister Ken Cheveldayoff said the province needs the flexibility.

He said an agreement will allow the province to proceed with clean coal and carbon capture and storage technology at its Boundary Dam and other coal-fired plants.

# Calendar of Events



www.canadadiving.com

## **15th International Specialty Conference on Cold Regions Engineering**

August 19-27, 2012

Quebec City, QC

[www.csce.ca/2012/iccre/](http://www.csce.ca/2012/iccre/)

## **Construction Law for Consultants**

September 13, 2012

Vancouver, BC or via Webcast

[www.apeg.bc.ca/prodev/events/Constr\\_Law\\_2012.html](http://www.apeg.bc.ca/prodev/events/Constr_Law_2012.html)

## **Saskatchewan Innovation Week**

September 16-22, 2012

Various places, various events

[www.saskinnovationweek.ca](http://www.saskinnovationweek.ca)

## **Water, Treat it Right**

### **Western Canada Section AWWA Annual Meeting and Conference**

September 18-21, 2012

Winnipeg, MB

[www.wcsawwa.net](http://www.wcsawwa.net)

## **Canadian Dam Association**

September 22-27, 2012

Saskatoon, SK

[www.cda.ca/cda\\_new\\_en/conferences/conferences.html](http://www.cda.ca/cda_new_en/conferences/conferences.html)

## **International Pipeline Conference and Exposition 2012**

September 24-28, 2012, Calgary, AB

[www.InternationalPipelineConference.com](http://www.InternationalPipelineConference.com)

## **51st Annual Conference of Metallurgists**

September 30-October 3, 2012, Niagara Falls, ON

[www.cim.org/com2012](http://www.cim.org/com2012)

## **Introduction to Stormwater Management and Modelling**

October 3, 2012, Prince George, BC

[www.apeg.bc.ca/prodev/events/](http://www.apeg.bc.ca/prodev/events/)

## **2012 Transportation Association of Canada Conference & Exhibition**

October 14-17, 2012, Fredericton, NB

[www.tac-atc.ca/english/annualconference](http://www.tac-atc.ca/english/annualconference)

## **Tunnelling Association of Canada**

October 17-20, 2012, Montreal, QC

[www.tac2012.ca/](http://www.tac2012.ca/)

## **Forming Our Future: American Concrete Institute**

October 21-25, 2012, Toronto, ON

[www.concrete.org/EVENTS/ev\\_upcoming\\_conventions.htm](http://www.concrete.org/EVENTS/ev_upcoming_conventions.htm)

## **15th Canadian National Conference on Drinking Water Canadian Water and Wastewater Association**

October 22-24, 2012, Kelowna, BC

[www.cwwa.ca/drinkingwaterconference\\_e.asp](http://www.cwwa.ca/drinkingwaterconference_e.asp)

## **Developing the Skills of Highly Effective Leaders The Banff Management Course**

October 24-27, 2012, Banff, AB

[www.banffmanagementcourse.com/](http://www.banffmanagementcourse.com/)

## **APEGS Continuing Professional Excellence Opportunity**

November 1-2, 2012, Moose Jaw, SK

[www.apegs.sk.ca](http://www.apegs.sk.ca)

## **ASHRAE 7th International HVAC Cold Climate Conference**

November 12-14, 2012, Calgary, AB

[www.ashrae.org/events/page/coldclimate2012](http://www.ashrae.org/events/page/coldclimate2012)

## **Electronic Materials and Applications 2013**

January 23-25, 2013, Orlando, Florida

[www.ceramics.org/meetings/electronic-materials-and-applications-2013](http://www.ceramics.org/meetings/electronic-materials-and-applications-2013)