



## ADDRESSING CONCERNS

When I first wrote my letter about Canadian railways, published in the March/April 2012 issue of *Engineering Dimensions* ("Efficient transport," p. 45), it was never my intention to use this publication as a forum to discuss the merits of Canadian railways, but to try to clear up some misconceptions that many people have about this vital industry.

I am pleased that Mr. Eder found my letter to be informative and interesting, and I am glad he has taken the time to voice his concerns ("Letter wording," *Engineering Dimensions*, September/October 2012, p. 56). Again, acting as a layman with no past, present or planned future affiliations with the railway industry except a lifelong interest in

railways, I will attempt to address Mr. Eder's concerns.

Regarding his concern about the term "engineer" being used, I, too, expressed this concern in a letter to *Engineering Dimensions* published in the November/December 2010 issue ("A true engineer," p. 85). However, the term "engineer" has been used in this context since railways were first started in the 1830s, and is now so deeply embedded in government laws and regulations as well as in corporate records, union contracts and public usage that the term has become in this context almost generic. If PEO were to challenge this usage, I am sure they would have a very tough battle on their hands.

Regarding his second issue, I somewhat agree with his point, but, in fact, the locomotive pulls the train; the "engineer" controls the locomotive and the conductor controls the operation of the train, as the conductor instructs the "engineer" when to start, when to stop, etc. So, as such, all three (locomotive, "engineer," and conductor) operate as a team. The train doesn't move until all three are in concordance.

As far as Mr. Eder's concerns about my use of English measurement units go, that is the way Canadian railways operate today and I did not want to change the context of my message. Locomotives are rated by horsepower not kilowatts, tractive effort is measured in pounds, brake pressure in PSI, distances in miles, speed in MPH, train and siding lengths in feet, etc. If this causes Mr. Eder concern, please take issue with me, not the editors, as they do a fine job. Actually maybe he should urge the railways to change their ways.

Lastly, the railways' tremendous efficiency advantage over other forms of land transportation is primarily due to the low rolling friction of the steel wheel on the steel rail, the modern diesel electric locomotive, and the use of roller bearings on all freight car axles.

Today, more and more containers are replacing the traditional box car. Trains of 150 cars, with double stacked containers are common. That would require 300 transport trucks and drivers to do the work of two railroaders. Think of the traffic congestion and increased pollution there would be if the railways didn't exist.

Thanks again, Mr. Eder, for your thoughtful letter.  
Clayton Morgan, P.Eng., Bowmanville, ON

## GOING OFF TOPIC

In August, members were asked for story ideas for 2013 *Engineering Dimensions*, but were reminded that "*Engineering Dimensions* focuses mainly on the legal, regulatory and ethical aspects of the profession." I found that puzzling as I would consider that most of the content of every issue doesn't meet that definition. That is fortunate in that it would be a most dry and uninteresting publication, otherwise. In the September/October 2012 issue, I found the article about the membership card study (p. 18) particularly thought-provoking. I wondered why an organization, with the stature of PEO, would beam with pride at presenting this "real world (environmental) problem" for two groups of four engineering students to solve. Firstly, the solution, which should have been intuitive to PEO well before 2011, was already in place. Secondly, we're talking about the

annual use of about 100 lbs of paper. I can't imagine how the eight individuals managed to occupy their time on this project and come up with an engineering presentation that covered more than the back of an envelope. I worry that this could constitute engineering study for academic credit. While no one could disagree with the plastic card initiative, holding it up as "environmentally sustainable corporate practice" is just a bit laughable. Any wonder why we get no respect! I would like to see you continue going off topic with content, but please present some of the interesting and innovative engineering work going on in our province rather than such triviality.

David Gelder, P.Eng., Mississauga, ON

## HIGH-QUALITY MEMBERSHIP CARDS

I find the article “Membership card study affords environmental design learning opportunity” *Engineering Dimensions*, September/October 2012, p. 18) a bit disturbing. I do not think it was wise to have students look at the PEO membership card purely from the point of view of environmental sustainability. For many professional engineers, the PEO membership card is used not just for discounts at partner companies but, rather, as proof of professional status to US Customs and Immigration, for the purposes of border crossings and visas, for business travel and work in the US.

Having spent 13 years working for a consulting firm, and crossing the border into the US frequently, I found that US Customs and Immigration did not have a very high opinion of the card. The previous, annually issued cards were seen as cheap and amateur. The permanent card was considered meaningless because of its lack of expiry. The cards were just about useless, even though the status of being a professional engineer is important and has merit for crossing the border into the US for business purposes. This will only get worse if the cards are printed on demand on regular paper, as anyone could then Photoshop such a card, and they will be truly useless. While this may work for various other membership systems (for example, frequent flyer and other reward programs have gone to the self-print option for membership cards), it does not work well for PEO members, with respect to this one situation. I believe that a self-printed card will only make things worse.

The one option I would hope that PEO would consider is an on-demand issue of a high-quality, membership card, perhaps for an additional fee, but that this card be a high-quality, hard-plastic card similar to credit cards, though without the magnetic stripe, with raised lettering and expiration. Surely, these types of cards are recyclable, or could be made recyclable? It would greatly help the many PEO members who cross the border or obtain work visas for the United States (such as TN-1 visas) that such a card be produced, and that PEO work with the Canadian government to make US Customs and Immigration aware of its existence and validity, perhaps not for individual border crossings, but at least for the application of work visas.

I doubt that engineering students have had this experience, or would be aware of this aspect of the membership card. Michael Woloch, P.Eng., Hamilton, ON



## TIME TO GROW UP

How many times are PEO and OSPE going to get together to agree to get along again? This is ridiculous immaturity on both parties and both parties are beginning to be a disgrace to my profession. PEO and OSPE wonder why there is a lack of involvement at the PEO and OSPE levels? The level of maturity is one reason, as well as the levels of bureaucracy involved with the process. Both parties are not results-based and very little progress is made year to year. PEO and OSPE jointly are slowly giving valid reasons for us to lose our self-regulating status.

The very frustrating thing between OSPE and PEO is the doubling and competing of services from both parties. Grow up, represent us as mature professionals, and stop boasting and playing games to determine who is better than the other. André Brisson, P.Eng., ing., Tillsonburg, ON



## DATE WRITING STANDARDS

There is a disregard (on the part of the information technology sector and the federal government) for standards relating to the writing of the date and time in all-numeric form.

The standards (ISO 8601; CSA-Z234.4) are deemed (for good reason) voluntary. Unfortunately, this seems to be, too often, translated as “You don’t have to pay any attention to them.”

Canada’s health-care fraternity is spending all sorts of resources to design electronic health-care records (“Creating electronic health records...What’s taking so long?” *Engineering Dimensions*, November/December 2012, p. 28). Just about any record worth keeping has on it the date. It has been my observation that there is a wide disparity of sources going into health-care records—MD’s offices, pharmacies, rehab facilities, hospitals, laboratories, etc., plus the testing equipment of which the embedded software includes the date but not necessarily in standard form.

It seems to me that if the engineering profession is to play a constructive role in associating with health care, it can do no less than provide rational inputs to the system; these inputs should include an insistence on standards as they impact the writing of the date in Canada’s health-care system. Duncan Bath, P.Eng., Peterborough, ON

## [ LETTERS ]

### IS THERE A CHOICE?

The fascinating article by Peter Ottensmeyer in your July/August 2012 issue (“Candu fuel waste re-used, recycled, eliminated: \$45 trillion of carbon-free electricity via fast-neutron reactors,” p. 47) describing conversion of Candu fuel waste into almost limitless electricity while substantially eliminating its radioactivity seems compelling and clearly begs his concluding question: Is there a choice?

If there is a downside to his argument, let’s hear it. If there isn’t, let’s get on with it—seems far preferable to burying it for the better part of half a million years when it could be usefully and advantageously cleaned up today.

Gerald A. Crawford, PhD, P.Eng., Mississauga, ON

### FLAWED FLUORIDATION

I support President Dixon’s exercise of his individual right to choose the water he wants to drink. Ms. MacDonald (*Engineering Dimensions*, November/December 2012, p. 78) is wrong to dictate that he (and the rest of us) do otherwise.

She needs to understand and respect the medical ethic of informed consent. She ought to consider thoroughly as a professional engineer whether the public interest is truly served by injecting fluoride, one of the three most poisonous substances, into our drinking water. Despite what fluoridation proponents dogmatically assert, recent domestic and international scientific and engineering research shows:

- it is a drug not proven to be safe to humans or other life forms and its dosage is not controllable by age, gender, stage of life, or underlying individual health conditions;
- it is ineffective in its purported purpose of reducing tooth decay while minimizing the incidence of dental fluorosis; and
- the typical fluoridating agent used in water treatment plants causes lead to leach from the water distribution systems (pipes, meters, faucets, etc.) supplying our homes and places of work.

In public policy terms, fluoridation is a flawed and unregulated practice that has failed to meet its stated objectives. It is an outdated dental health technology that incurs significant emotional and economic costs. It has been surpassed by superior means of reducing tooth decay while avoiding adverse health effects.

Unlike Ms. MacDonald, engineers who are well informed on fluoridation know it is not in the public interest to continue this harmful practice. Gerry Cooper, P.Eng., MBA  
Public policy advisor, Toronto Coalition to End Fluoridation

### FROM THE TAP

I was quite surprised to read in the November/December 2012 issue the letter to the editor titled

“Tap not bottle” (p. 78). Its

author may be living in a small non-“fluoridated” town and might not be aware of the perils from the so-called “artificial water fluoridation.” Unfortunately, this problem has been going on unnoticed (or turned a blind eye on) by engineers in this country for far too long.

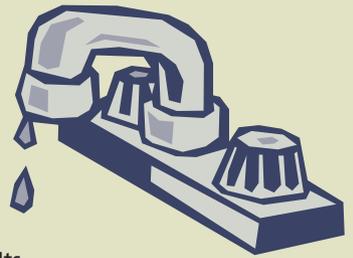
For people who are aware of the problem, and who live in the greater Toronto area or in one of the other 30 to 40 per cent of Canadian communities that are still being force-medicated through this archaic and unethical practice, drinking, or even showering, from the tap represents a major concern.

For further, more detailed considerations on this topic, I would like to refer readers to the following articles published in *Environmental Science & Engineering Magazine*:

- “Canadian water providers ceasing artificial fluoridation,” by Peter Van Caulart, July 2008; and
- “Does artificial water fluoridation mean no golden years for the elderly?” by Sheldon Thomas, September/October 2012.

I send my child to school every day with a bottle of delicious home-filtered drinking water in his backpack, and I bring some to work for myself. No hydrofluosilicic acid and other intentionally introduced contaminants in my water bottle, thank you very much!

Vladimir Gagachev, P.Eng., Mississauga, ON



Letters to the editor are welcomed, but should be kept to no more than 500 words, and are subject to editing for length, clarity and style. Publication is at the editor’s discretion; unsigned letters will not be published. The ideas expressed do not necessarily reflect the opinions and policies of the association, nor does the association assume responsibility for the opinions expressed. All letters pertaining to a current PEO issue are also forwarded to the appropriate committee for information. Address letters to [jcoombes@peo.on.ca](mailto:jcoombes@peo.on.ca).