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2010 August 27

BY COURIER, FAX, E-MAIL

The Honourable Christopher Bentley
Ministry of the Attorney-General
11th Floor, 720 Bay Street
TORONTO ON M5G 2K1

Dear Minister:

Urgent Action Needed regarding A Proposed Modification to the Engineering Act as included in Bill-68

Summary

We wish to bring to your urgent attention a major problem with one specific component of the currently-proposed revisions to the Ontario Engineering Act, within the Omnibus Act (Bill 68). This revision – the removal of the exemption for natural sciences from the definition of the practice of professional engineering (Chapter 1 of the current Act) – could make it impossible for many, if not most, natural scientists (physicists, chemists, biologists, computer scientists, etc.) to practise their professions, in industry, government, and universities. This could clearly have a major negative impact on Ontario, as well as on the professions concerned. We appreciate that our intervention comes at a late stage of the Bill's progress; however, while our very serious interest in this matter over many years was certainly known to the Professional Engineers of Ontario (PEO), and although PEO has indicated to the Standing Committee reviewing the Bill that they have "consulted broadly with other groups", neither we nor (to our knowledge) any other scientific societies were either informed of the existence of the new proposals or consulted in any way. Moreover, despite the representation by PEO to the Standing Committee that the proposed bill 'adopts the national definition of "professional engineering"' (i.e. that suggested in the attached guidelines published by the Canadian Council for Professional Engineers), the proposed legislation fails to include the companion natural science exemption clause which is part of those same guidelines.

Details

On Thursday, August 19th, the Canadian Association of Physicists (CAP), through a comment in passing to one of our members, became aware of a proposed modification to the Ontario Engineering Act which is embodied in Bill-68. We immediately contacted your office, as well as the Ministry of Economic Development and Trade, to express our dismay at not having been advised of, or consulted on, this initiative – neither by the Professional Engineers of Ontario (PEO) nor any other official channel – and to register our most serious concern over the fact that the proposed definition of the practice of engineering no longer includes the exemption for natural scientists that appears in the current Act.

We are currently approaching the PEO to determine whether this omission was an oversight or a deliberate modification. If it was an oversight, we would expect that, with the agreement of PEO, Bill-68 can be modified to include an exemption before it is presented to the Assembly for 3rd reading. If the modification was deliberate, we are at a loss to understand why we were not consulted in the first stages of this process: the PEO was well aware of our interest in this aspect of the Act, because of (i) our initial three years of negotiations with PEO and our eventual intervention at the legislature concerning an amendment to the Act, from 1981-1983 (which intervention resulted in the inclusion of the current exemption in the definition of the practice of engineering; see attached summary of intervention published in *Physics in Canada* in 1983) and (ii) more significantly, because of an exchange of communications that the CAP had with a senior PEO officer as recently as September 2009 regarding a matter wherein the exemption for natural scientists was an

essential element of the discussion. At no time during that 2009 exchange, nor at any other time, were we made aware of the Bill-68 initiative and proposed removal of the exemption from their Act. Nor, as far as we have been able to determine, was any other scientific society consulted in any way.

What is the problem? As you are no doubt aware, there is considerable overlap between engineering and science. A key part of the definition of the “practice of professional engineering” (which, with narrowly defined exceptions, is reserved to members of PEO) is that it “requires the application of engineering principles”. But “engineering principles” are generally agreed to include the principles of natural science, upon which they are of course ultimately based. The further limitation of the definition of the “practice of professional engineering” is that it be one of a very broad list of activities that “concerns the safeguarding of life, health, property, economic interests, the public welfare or the environment, or the managing of any such act” As you will be well aware, “concerned” is an extremely broad criterion, so that a very large number of activities that are performed daily by natural scientists would be prohibited should Bill 68 with its current wording become law.

Here are just a few examples of cases where highly qualified expert scientists in their field would not be able to practise except under the management of an engineer (who might know little or nothing about the speciality): (i) a scientist who is a world expert on lasers in a government laboratory, academia or industry (obviously involves potential health issues, and potentially economic interests); (ii) a fully-qualified, experienced medical physicist, an expert in his field practising in a hospital (concerns health and life); (iii) a fully qualified, specialist meteorologist with a degree in physics working as a weather forecaster (concerns public welfare and the environment); (iv) a Ph.D. biologist at a vaccine manufacturer or biotech start-up (concerns health, public welfare and economic interests); (v) a Ph.D. chemist developing a new drug (concerns health and economic interests); (vi) any scientist (physicist, chemist, computer scientist, etc.) in industry, government or academia working on anything that could possibly be patentable or create other economic value (concerns economic interests).

It was because of the great difficulty of defining engineering principles without sweeping-in natural science that a specific exemption for the practise of natural science was included in the current Act. For the same reason, removing the exemption would have far reaching and very damaging impacts, not only on the scientific community, but also on Ontario’s economy, post-secondary research and education system, and even health care. It is for this reason that the CAP argued vehemently (and successfully) to have the exemption included in the Ontario Act in the first place and has been working consistently over the years to ensure that exemptions exist in each of the provincial Acts; a very difficult and time consuming task given that each province has authority over its own Act.

To avoid issues of this kind, and particularly to meet the concern of engineering societies that the natural science exemption be better defined, the CAP has long been in favour of having an established national definition of the practice of engineering which could then be embodied within each of the Provincial Acts. In this regard, we partnered with a wide variety of other natural science societies in the early 1990s. This joint body (the Natural Science Societies of Canada, NSSC) met with the Canadian Council of Professional Engineers (CCPE – now operating as Engineers Canada). This is the national organization of the 12 provincial and territorial associations that regulate the profession of engineering in Canada and license the country's more than 234,000 members of the engineering profession. As a result of these efforts, which spanned the period of one year, CCPE and NSSC negotiated and ratified an agreement that recommended a national definition of the practice of engineering as well as the wording for a separate, accompanying exclusion clause related to the practice of natural science, for use in all future amendments to the relevant legislation in all provinces (see attached NSSC/CCPE communiqué issued on this matter, as well as attached summary of negotiations published in *Physics in Canada* in March 1995). The CCPE modified its National Guideline for the Definition of the Practice of Professional Engineering to reflect the recommendation that all future amendments to legislation (Engineering Acts) include this negotiated national definition as well as the accompanying exemption clause. These definitions and statements are still embodied in the Guidelines available through Engineering Canada’s website (see attached copy, obtained from http://www.engineerscanada.ca/e/files/guideline_definition_with.pdf).

It is significant that the proposed definition of the practice of engineering included in Bill-68, although worded slightly differently, is, for all intents and purposes the definition proposed by the CCPE to be adopted nationally; however, the recommended accompanying exemption clause was not included. This is clearly not consistent with PEO’s expressed intent to harmonize with other provinces, the majority of whom have included exemption clauses in their Acts. In fact, at this time, only three provinces (BC, AB, NS) do not include some form of exemption for natural scientists in their

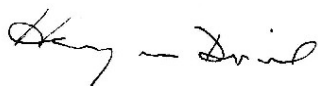
Engineering Acts; moreover, the CAP has obtained agreement from the BC and NS engineering associations that they intend to include an exemption when they next seek an amendment to their Act. Clearly the strong trend is to include a natural science exemption as an essential element of the Act. Moreover, as previously indicated, despite the representation by PEO to the Standing Committee that the proposed bill 'adopts the national definition of "professional engineering"' (i.e. that suggested in the attached guidelines published by the Canadian Council for Professional Engineers), the proposed legislation fails to include the companion natural science exemption clause which is part of those same guidelines.

I am sure you will agree that, given the long history of activity on the part of the natural scientists to ensure that the definition of the practice of engineering includes a natural science exemption clause, the CAP (and all natural science societies) should have been consulted on this matter, which hopefully would have ensured that the exemption was included in the first draft of Bill-68. As a minimum, we should have been given the opportunity to make a presentation to the Standing Committee on Finance and Economic Affairs when it met in early August to present our request that the exemption be included. Unfortunately, as we only became aware of this situation through happenstance on August 19th, this was not possible and we now have to turn to your office and to the Ministry of Economic Development and Trade to seek a way to address this issue before the Bill is taken to 3rd reading.

We hope you will agree that we have a strong case which warrants your taking action, even at this late stage, to ensure that Bill-68 is not presented to the Assembly for 3rd reading with its current wording. The inclusion of the exemption as worded in the National Guidelines for the Definition of the Practice of Professional Engineering produced by Engineers Canada would resolve this issue to the satisfaction of the natural science community.

This matter is, of course, complex, but is critical to a major Ontario professional community, and to Ontario's future economic and educational well-being. We therefore request an opportunity to meet with you and your colleagues to discuss this matter further as soon as possible, and to explain any points that may not be clear. While I am currently out of the country until September 3rd, the CAP's Past President, who is acting on my behalf in my absence, is fully apprised of this situation and is available to meet with you. If you contact Francine Ford, Executive Director of the Canadian Association of Physicists by e-mail at cap@uottawa.ca or by phone at 613-562-5614, she will take care of arranging our participation.

Yours sincerely,



Prof. Henry van Driel, PPhys.
President, Canadian Association of Physicists
Professor, University of Toronto

Copies to: The Honourable Sarah Papatello, Minister of Economic Development and Trade
 The Honourable Dalton McGinty, Premier of Ontario
 Mr. Pat Hoy, Chair, Standing Committee on Finance and Economic Affairs
 Mr. Kim Allen, CEO and Registrar, Professional Engineers of Ontario
 Executive Directors of natural science societies (CIC, CMOS, COMP, CCPM, ACPO,
 CMS, CSC, CSEB, SSC, CAMS, CIPS, CLRA)
 Chair, Canadian Consortium for Research (CCR)

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