



Ontario Society of Professional Engineers

September 11, 2001

Mr. James Van Loon
The Walkerton Inquiry
180 Dundas Street West, 22nd Floor
Toronto ON M5G 1Z8

Dear Mr. Van Loon;

Please find attached our recommendations for submission to the Inquiry's Part II Public Hearings, no. 7 & 8 (Management of Water Providers; Laboratories), scheduled to take place on September 20th, 24th & 25th, 2001.

By way of this letter we request an opportunity to speak at the hearings to present our recommendations. In your e-mail of yesterday, you asked whether the September 20th date would be acceptable to us – it is, thank-you.

As discussed previously, we will shortly be providing expanded comments on the utility of the Certificate of Approval in ensuring that engineering work is either carried out by, or overseen by a licensed professional engineer.

Thank-you for your flexibility regarding dates and deadlines.

Yours very truly,

Robert A. Goodings, P.Eng.
Chair, OSPE Board of Directors

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**Recommendations submitted The Walkerton Inquiry Part II, Public Hearings 7 & 8
(Management of Water Providers; Laboratories), by the Ontario Society of
Professional Engineers**

Context for recommendations:

The position of the Ontario Society of Professional Engineers with respect to drinking water systems in Ontario is outlined in (draft) our paper, *Safe Drinking Water & the Role of Professional Engineers*, posted on the Walkerton Inquiry's website. It can be summarized very briefly as follows:

1. Historically, engineers have been involved in every aspect of drinking water production: source selection (and protection), design of wells, treatment plants and treatment processes, construction of facilities and distribution systems, and infrastructure renewal.
2. Over the past decade or so, however, the involvement of professional engineers in the water supply system has declined on a number of fronts:
 - far fewer professional engineers are employed by the Ministry of the Environment (other than in the Approvals Branch), and they have all but disappeared from policy-making and senior management roles;
 - whereas once there was an ongoing liaison between ministry engineers working out of MOE's regional offices, and municipal water system operators, there are now very few, if any, professional engineers in the ministry's regional offices;
 - a similar trend is seen at the municipal level; municipal water systems (particularly smaller systems) are far less likely to be overseen or monitored by a professional engineer (municipal employee or consultant) on an ongoing basis.
3. Facilitating this reduction is a lack of "demand-side" legislation in Ontario pertaining to water systems, i.e. legislation requiring that a professional engineer undertake specific acts or types of work with respect to water systems. The result is that a professional engineer or engineers may never be involved in work that clearly entails engineering.
4. This situation exists, despite the fact that the design, construction, monitoring and renewal of water systems, including the design of treatment processes, significantly involves engineering.
5. As government reduces its direct involvement in inspecting, monitoring, and advising, and private sector involvement grows, there is a need to ensure not only that technically-qualified people undertake certain kinds of work but that those who take responsibility for such work are professionally accountable.

**Recommendations to The Walkerton Inquiry Part II Public Hearings 7 & 8
(Management of Water Providers; Laboratories), submitted by the Ontario Society
of Professional Engineers**

1. A provision under the *Ontario Water Resources Act* should be considered requiring that original designs for water facilities and distribution systems be sealed (“stamped”) by a professional engineer, and kept on record; the same should apply to designs for modifications and replacements to treatment plants and components of distribution systems.
2. A provision under the *Ontario Water Resources Act* should be considered requiring that a licensed professional engineer monitor the ongoing operation of water treatment plants and water distribution systems to identify problems and ensure adequate maintenance and renewal.
3. We do not suggest that the items referred to in recommendations 1 & 2 above constitute a definitive list of items that should be included in demand-side legislation. In fact, we have made further recommendations for demand-side legislation in a previous submission to the Inquiry’s Public Hearings 2 & 3, dated July 3, 2001.

However, we strongly urge Mr. Justice O’Connor to consider the need for demand-side legislation, i.e. legislation which requires that certain types of work be either conducted by, or overseen by a professional engineer. Although Certificates of Approval issued by the Ministry of the Environment under the *Ontario Water Resources Act* provide assurance in certain situations, they do not in others. As mentioned in our letter accompanying these recommendations, we will shortly be submitting expanded comments on the strengths and weaknesses of the Certificate of Approval in ensuring that professional engineering is undertaken/supervised by licensed engineers who are professionally accountable.

4. Ontario’s new water quality regulation (Ontario Regulation 459/00) introduced in August 2000, includes a requirement that all municipal water systems be assessed, and a report prepared by a licensed professional engineer every three years. More frequent reporting should be considered, and should include all parts of the distribution system.
5. A licensed professional engineer should be involved in corrective action for problems originating on the distribution side of the system, i.e. identifying the problem and developing a solution. Methods used to detect the problem and deal with it should be documented and maintained on record.
6. Some municipalities might consider the advantages of grouping together in a single organizational entity (inside or outside the municipal organization structure), certain user-pay, technical services, such as water, sewage and electricity, in order to attain the critical mass and economies of scale needed to support in-house professional expertise, including professional engineering.

7. Consideration should be given to introducing a standardized water works accounting system or agency to monitor spending on infrastructure renewal, to ensure that reinvestment in infrastructure is built into water rates. Short-term and long-term financial planning should include professional engineering input.
8. In addition to current classifications based on operator certification requirements and frequency of microbiological testing, water treatment plants and distribution systems should be classified according to the degree of supervision/monitoring by a professional engineer required.

NOTE: *A number of the recommendations above suggest that consideration be given to requiring that professional engineers undertake certain activities within the water supply system. We note as a precedent the Occupational Health and Safety Act, which includes numerous requirements for approval/review/design by a professional engineer (many have come about due to accidents in the manufacturing and construction industries).*

One example is a recent amendment to the OH&S Act which requires that a Pre-start Health and Safety Review be conducted by a professional engineer prior to manufacturing equipment going into service, following installation or modification. In 2000, the Ministry of Labour completed stakeholder consultations to determine the kinds of situations that would trigger an engineering review, demonstrating that it is possible to define circumstances that would (and would not) require such reviews. A similar approach could be taken in defining circumstances in water supply operations, maintenance and infrastructure renewal that require intervention by a professional engineer.

Task Group Members

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Joyce Rowlands, Director, Public Affairs, Ontario Society of Professional Engineers (staff support & writer)

Reviewers of OSPE's written submission to the Walkerton Inquiry, *Safe Drinking Water & the Role of Professional Engineers* (March 2001), from which the above recommendations are drawn

Aziz Ahmed, P.Eng., Vice President, Professional Engineers Government of Ontario (PEGO)

Steven Bonk, former President, American Water Works Association (AWWA), and former Director of Water Supply, Regional Municipality of Ottawa Carleton

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