



Oral Presentation

Submission from the Provincial Council of Women of Ontario

In the Matter of

**Ontario Power Generation Inc.,
Pickering Nuclear Generating Station**

Request for a ten-year renewal of its Nuclear Power Reactor Operating Licence for the Pickering Nuclear Generating Station

Commission Public Hearing – Part 2

June 2018

Exposé oral

Mémoire du Provincial Council of Women of Ontario

À l'égard de

**Ontario Power Generation Inc.,
centrale nucléaire de Pickering**

Demande de renouvellement, pour une période de dix ans, de son permis d'exploitation d'un réacteur nucléaire de puissance à la centrale nucléaire de Pickering

**Audience publique de la Commission –
Partie 2**

Juin 2018

THE PROVINCIAL COUNCIL OF WOMEN OF ONTARIO (PCWO)
Established in 1923

Ms. Louise Levert
The Canadian Nuclear Safety Commission
interventions@cnsccsn.gc.ca

**Intervention re: Pickering Nuclear Generating Station Licence Renewal to 2024,
Case No. 2013 –H-03**

Dear Ms Levert,

These are the comments of the Provincial Council of Women of Ontario (PCWO) regarding Case No. 2013-H-03. They are prepared by our PCWO Environmental Advisor , Gracia Janes, who would like to participate by teleconference at the June 26th-28th CNSC Hearing .

Edeltraud Neal, PCWO President
edeltraud.neal@gmail.com

Introduction

In 2013 the Provincial Council of Women of Ontario.1. presented a brief in opposition to Ontario Power Generation's (OPG) plans to lengthen the operational life of the Pickering B nuclear reactors to 2018, as they were based on faulty assumptions, lacked independent and convincing scientific validation and neglected the strong public interest and concerns at the time.2. OPG's current application to extend its deadline for shut- down even further to 2024, and its other plans for stabilization to 2028, exacerbates our very strong opposition.

Therefore, PCWO asks the Canadian Nuclear Safety Commission (CNSC) to refuse OPG's unnecessary 10 year life- extension licence application for the Pickering B nuclear reactors.

Licence Extension an Irresponsible Risk

At the 2013 CNSC Hearing on the Pickering Life- Extension, Commission Members and many individuals, community groups and broad-based public interest organisations , including PCWO, made strong arguments against the 5 year Pickering B life- extension subsequently granted by CNSC. Nevertheless, rather than follow its less-than-adequate plan for operation and shut-down of Pickering B nuclear reactors by 2018, OPG is again asking CNSC to ignore the huge risks of operating this aging

nuclear generating station, with a track record of nuclear incidents, as it presents its application for a 10 year life extension ³. It is also disturbing that OPG has admitted at a recent Ontario Energy Board hearing that investments in safety upgrades to counter the known risks may not be affordable ⁴.

Growing Public Concerns

As thousands of new residents move into Pickering, and the Toronto area each year, legitimate concerns for public health and safety, environmental protection, and risks of damage to livelihoods should there be a disaster, are growing even stronger. This is evidenced by the public's significant participation in the 2013 CNSC Pickering hearing, the recent public review and comments on Ontario's Nuclear Disaster Plan, Durham and Toronto requests for strengthened nuclear emergency planning, Durham's plans to mitigate negative social effects of station closures, and very recently, Toronto's reaffirmation of its Nuclear-Free status and comments at the Toronto Board of Health public meeting on this issue on April 16th 2018, which drew attention to the added danger of 400,000 irradiated fuel bundles in its spent fuel pools, which could provide a target for any planned hostile attack ⁵.

Public Interest Through Unbiased Expert Evidence

PCWO is hopeful that at this current CNSC hearing, such grave public concern and municipal awareness, backed by the evidence of unbiased-independent experts, will be recognised by the Commission, and for once will outweigh pro-nuclear evidence of OPG experts, nuclear-related and dependent groups, such as Women in Nuclear, and even staff advice that gave credence to inaccurate, out-of-date information to justify CNSC's extension of OPG's Pickering B licence in 2013.

A clear example of the latter issue can be found in the CNSC background rationale for its decision, which disregarded evidence, cited by PCWO, from a lengthy 2003 study by Dr. Mohajer and E. Neyles, documenting the steadily increasing numbers and intensity of earthquakes at the Pickering nuclear station, which lies directly above an active fault line ⁶. Instead, in the background to its decision, CNSC cites an in-house OPG review and a Natural Resources Canada argument based on a one and a half day study and very old 1940s references. Therefore PCWO strongly disagrees with the Commission's acceptance of staff and Natural Resource Canada's assurances of "well-understood" geologic stability in the area.

Questions that need to be answered:

- Is it socially, environmentally, and economically responsible to allow an operating life extension for Pickering B reactors, when they are well past their initial planned life span, have an old and flawed operational design and a history of "significant events" ?

- Are the astronomical costs of a disastrous nuclear event e.g. environmental damage, death, injuries, sheltering, evacuating, business- loss over a potential lengthy time, rebuilding homes and businesses, worth a life extension for nuclear plants that provide such a small fraction of Ontario's energy demand, and most of which is sent to the USA ?
- How can the public trust OPG's promised plans , given its failure to date to comply with the 2013 CNSC licence requirements?

Conclusion

To conclude , PCWO reiterates our view that it is time to close OPG's aging and troubled Pickering nuclear plants, which lie on the edge of Lake Ontario, over an active geological fault line, and close to millions of people on both sides of the border. Their continued operation will pose unacceptable risks to the health, safety, environment and economy of the millions of residents of Pickering and Toronto which is the urban heartland of southern Ontario, and further afield, if there is a nuclear disaster, whether through failed operating systems, human error, nefarious actions or natural events.

References and Background:

1. The Provincial Council of Women of Ontario (PCWO) is a member- funded, voluntary non - profit, non- partisan, non-sectarian organization, which has worked for the betterment of women society since 1923 .

The precautionary principle underlies all of our advocacy, and we have developed strong policies regarding nuclear power's many dangers and the need for energy conservation, energy efficiencies and alternative forms of energy to replace this extremely risky energy source.

2. 2013 Brief re Pickering- attached file.

3. Letter from Dr. Frank Greening , retired nuclear researcher formerly on staff at Pickering, to the Hon Frank Chiarelli, Ontario Minister of Energy January, 2016 .
Partial list of 20 serious incidents since 1983:

* July 2007, OPG heavily criticized for failing to act promptly to fix a leak at Pickering's radiation containment system.

*March 2011 leak of 73,000 litres of demineralized water into Lake Ontario at Pickering A . OPG acknowledged this kind of leak was unacceptable, especially considering the Great Lakes are sources of drinking water for millions of people.

* Oct 12, 2012 Pickering Nuclear had a spill of approximately 400 litres of moderator water and an OPG employee was exposed to radiation

* Jan 1, 2013 A fire broke out in a lube oil purification system in the Pickering Nuclear unit 1 turbine hall

* July 2015 Staff at Pickering discovered *“incorrect blocking and locking of a valve that is part of a guaranteed shut down system”*

4. May 3rd 2018 Web cast, Greenpeace , NorthWatch, Ontario Clean Air Alliance, PCWO, NFU,

5. Brief Dr. Gordon Edwards to Toronto Board of Health April 16 , 2018 public meeting on Toronto’s reaffirmation of its Nuclear-Free status.

6. PCWO 2013 Brief re Pickering Life Extension, pages 11,12. **“Today such structures are recognized as being defined by persistent earthquake activity** (Mohajer 1991,1993,1995 Wallach et al 1998) and a magnitude 3.1 earthquake occurred within 3 kms of PNGS on May 24th 2000. Ten smaller magnitude earthquakes have been recorded in the last decade along the structure between Niagara and Pickering by the seismic networks of the Geological survey of Canada and the United States Geological survey. The more recently constructed Perry nuclear plant in the USA was temporarily closed in 1986 by a magnitude 5 temblor along the same CMBBZ structure. **The local community has every right to be concerned about the presence of an aging nuclear reactor in their midst.”** (emphasis added) **3. (ibid**

The article goes on to say that **“ Unfortunately, Godin et al (2002) miss much of the current literature on the subject and their interpretations are not in accord with present understanding.”**, (. **National Research Council on its May 2003 Research Web site**) and further notes that Godin et al could have used much more relevant and extensive materials coming out of provincial waste management exercises during the 1990s . (emphasis added)

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The Canadian Nuclear Safety Commission
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Intervention re: Pickering Nuclear Generating Station Licence Renewal to 2020, Case No. 2013 –H-03

– Gracia Janes VP Environment, April 26th, 2013

Introduction

The Provincial Council of Women of Ontario (PCWO) opposes the Ontario Power Generation application to extend the operational life of the Pickering B nuclear reactors. PCWO fails to see any over-riding rationale for OPG to bring this life extension application forward at this time, nor, in the absence of required safety studies to date, any convincing evidence that the reactors can continue to be operated safely without undue risk to public health, safety and the environment.

PCWO asks that the Canadian Nuclear Safety Commission (CNSC) use its power under the Nuclear Safety Control Act to refuse this life extension in order to protect the public and the environment from unreasonable risk caused by the operation of these aging and troubled reactors which, up until this application was presented, were considered to be at the end of their operational life spans by the end of 2014.

To make our case we will deal with :

- the huge risks to millions of people and the economy of this part of Ontario should there be, as the CNSC Chair Binder put it *“the doomsday” “most fearful event”* accident .
(Transcripts.Darlington.December 3rd 2012 . pages272, 292,293.)
- the location of the Pickering Station directly above an active fault line which exhibits persistent seismic activity and the excellent independent counter-views to those of CNSC staff regarding the potential dangers .
- the findings of the Federal Ministry of Environment (30 years ago), the 1994 ACES report and the 2008 Ontario Drinking Water Advisory Committee report regarding the dangers to

public health from tritium releases and the need for stricter standards, versus the contrary views of the CNSC staff views.

Concerns Regarding a Potential Doomsday Event

Given the Pickering B nuclear reactors' location on the edge of Lake Ontario in the heartland of urban Ontario, where most of its industrial and commercial activities are located and millions of Ontarians (and Americans) live around and in close proximity, PCWO's most significant concern with a life extension of these reactors is the possibility of a single or multiple reactor melt down caused by earthquake, malevolent act, human error, or other at this aging and troubled nuclear plant.

We note that similar concerns have been raised by many groups across the province and by other regulatory bodies and Environmental panels. For instance, at the December 3rd hearing on the Darlington Station Refurbishment and Continued Operation, the Durham Nuclear Awareness representative raised the very worrisome issue of possible multiple reactor failures as follows :

But to us the most important thing that you missed or ignored was recommendation 63. "The(JRP) panel recommends that prior to construction, the Nuclear Safety Commission -- Canadian Nuclear Safety Commission require OPG to evaluate the cumulative effect of common cause severe accident involving all of the nuclear reactors in the site study area to determine if further emergency planning measures are required." ... "And I don't see how the public or communities can have any confidence in the CNSC, as an independent watchdog, when you ignore recommendations from a body such as this. And so our request again is that multi-unit accidental radiation releases must be considered before this environmental review is approved And it gets worse again with the recent revelation that Emergency Management Ontario has made a request that the CNSC review larger radiation releases in the current review in light of Fukushima and the JRP recommendation. {Transcript. Darlington . December 3rd, 2012 . page 309}

PCWO also note that at the same hearing, CNSC Members and the Chairman had some doubts about accidents and some precautionary advice to staff.

MEMBER HARVEY:

That choice that you (staff) or OPG made about the nature of the accident is such that there will never be large-scale releases? I mean, it's the impression that we have and that the public also. {ibid, page 280}

MEMBER HARVEY:

I think we're going to have with the -- maybe in a year and half, some indication of the crash of a commercial accident on the plant. I mean we have -- there has been studies on a small craft crash but, is that -- is my thinking good, that we're going to have some indication of a larger plane crash and could that be over the accident that has been chosen for the 10 minus 6? {ibid page 280/281/282}

...MEMBER BINDER ...what's your view -- the dilemma we always having here is because it's such a low probability of event, you guys are ignoring it. Everybody is ignoring it. Yet for the citizen, even though it's a low probability event, that's the most fearful event. So you've got to bridge those two conflicting issues. Low, low frequency, but maybe high impact, and you've got to deal with it in all your brochures. That would be my view. ... make sure that all the citizen of this community are aware of what to do with emergency plan.

This last comment related to the circulation to Durham residents of a brochure on what to do in case of an emergency, but failed to mention a nuclear accident. As well, one of the presenters that day mentioned that the use of nuclear warnings was opposed by businesses in that area.

It is interesting that in this current Pickering application CNSC staff noted the fact that all necessary warning measures were finally in place for the 3 km containment area and that the 10 km area had yet to be dealt with. {Transcript.Darlington.December 3rd 2012 .pages 268-271} Which is not to mention that it will take between 5 and 9 hours according to staff to evacuate the 3km area and far more time one would imagine to clear 10 kms or more out. Neither staff nor OPG make mention of the possibility that if the wind is strong or a system fails, winter weather is extreme etc. that there could be chaos, although Member McDill brought this kind of issue up on December 5th , as follows .

MEMBER MCDILL: So if there's any kind of emergency in the area, it doesn't have to be nuclear, as you say it could chemical; if there is no power, the communication centre will be struggling to manage on backups, backup power, backup communications. At that point, it's unlikely that your website will be accessible in the community. At that point, this is when the community will need the most to be able to communicate with you. And many of us in Ontario have gone through a number of things like the grid failure, a number of summers ago when cell towers couldn't

accommodate the load from the community trying -- just families trying to reach each other and I was one of those. All the traffic lights went on four-way red flash, which has a methodology if people follow it to get through. ..." {Transcript. Darlington. December 5th, 2013. pages 65,66 }

We would add to this, where will people be housed and for how long? Should the perimeter be far larger than 10 kms? How will businesses stand the commercial losses over even the 5 to 9 days or more? What about farmers and farmland?

Regarding the Nuclear Liability Act provision of insurance of \$75 million per incident for home, business and institutional owners, through OPG, as mentioned in the Darlington transcripts of December 5th, and the admission that it should be far higher, this is just the tip of the iceberg. Not only are the people of Ontario ultimately paying for this, but we will all suffer huge, inter-related and cumulative costs from the interference with industry and commerce, environmental, health and social impacts.

This issue is not just about 3-9 day temporary move for those in the 3km to 10 km containment area, but one that even within these small areas would be a potential economic catastrophe. We note also, that although plans are unfolding – albeit in a rather disjointed way- through multiple levels of government, due to the recognition of the potential for an extreme and unexpected event post Fukushima- this is not a Mississauga train derailment in 1979, well over 30 years ago, where luck and a quick witted Mayor helped avert disaster and evacuated thousands of residents. Even this event could have been a significant disaster had the wind been up and/or the wrong human decision made. There really wasn't much planned about it!

We also remember the Hamilton Plasco fire of the 80s, where there was a very close call, what with the risks of pollution and dwindling food supplies and other material necessities, due to the current 'just –in-time-delivery pattern whereby very large storage warehouses have become a thing of the past. An after-the-fact result was the Hamilton emergency plan with subsequent plans to involve the community, e.g. the frail and the elderly, children, the physically challenged more closely and pro-actively.

Staff and the Hearing Process as Possible Barriers to the Commission Acting on our Recommendation to Refuse OPG's Proposal for Pickering Life-Extension

Any independent observer, or reader of the December 2012 Darlington transcripts, would understand PCWO's considerable concern that CNSC staff is failing to take a far more precautionary approach. This is particularly important given the extremely serious nature of the current Pickering nuclear life extension proposal, should things go awry. The pattern of staff deflecting and putting off important environmental issues

until further down the road for instance, was reflected clearly in the following query of Commission Member Velshi at the Darlington refurbishment and life extension hearing :

MEMBER VELSHI:

Or four separate times in a year. Okay. But you got my question. The second one, really, is more fundamental on what really is the value of the EA as a planning tool when there could be something fairly substantive that would come out from the Integrated Improvement Plan once the ISR and all the other stuff is done. So where you look at a local probability incident and, you know, now there's a whole lot scope of work that needs to be done with fairly significant environmental impacts as a result of that. So we've heard repeatedly that when the licensing process evolves, if this project goes ahead, that's when they'll get the full picture on exactly what the implications are. And **I'm just wondering would it not be more prudent to have a look at that as part of the EA process to make sure that there is a good handle on the full likely impact, as opposed to waiting for another piece to come down the road?** (emphasis added) {Transcript. Darlington . December 3rd , page 288 }

Member Velshi's precautionary query reflects very well what PCWO feels is necessary i.e. a clear look at all the possibilities up front rather than some undefined point down the road, which indeed may be after the fact of a possible "*local probability incident*".

As we noted at our December 4th CNSC hearing presentation regarding Ontario Power Generation's Darlington refurbishment and continued operation, PCWO has participated in a number of CNSC hearings over the past several years, to no avail . And, it has become obvious, as Dr. Gordon Edwards has so plainly pointed out at the same hearing, that CNSC staff appear to work in tandem with nuclear project proponents to move things along apace.

Examples of note are Darlington's site preparation for new build, (despite the lack of a final type of reactor- the 2nd generation not being off the drawing board), the Bruce nuclear steam generator proposal shipments on the Great Lakes, and the recent CNSC plan to ship highly radioactive liquid waste containing Highly enriched uranium 1,900 kms from near Chalk River to South Carolina which just got the go-ahead.

Given that CNSC's mandate is to protect the public, it would seem that the staff should act in that public interest by taking the most precautionary stance possible, exploring every option and variable, listening to outside independent witnesses and working with them and the public.

This method was encouraged and practiced by the Seaborn Commission in the 1990s at its lengthy public hearings on the burial of high level nuclear waste –where

transcripts were concurrently available during the hearings, independent groups of experts and other individuals and groups were solicited, and the views and queries of an Independent Scientific Review Panel, the Royal Geographic Society and other experts, as well as public presentations, were heard and considered seriously by the Commission Panel. And, rather uniquely, the public were able to question other presenters.

In stark contrast, while CNSC Commissioners and the Chair ask important questions during the hearings, the staff appears to be always on the defensive about their

support for going ahead with nuclear projects and on the offensive towards differing views.

Pickering's Geology and the Risk Factors

An excellent example of this defensive attitude, and lack of due attention to other scientific views, was exhibited in Staff's responses to questions of geology and what they call "a stable seismic" area near and under the Darlington and Pickering areas. Their reference points are found in provincial, local and federal studies that barely touch on the eons of geologic history – only those of the past 180 years- and run counter the geologic knowledge of qualified independent experts.

For instance, as PCWO noted in our presentation on December 4th re Darlington Life Extension and Retrofit, *"It is very important to consider the periodicity, clustering and magnitude of earthquakes, but foolish to give assurances based on data that goes back only one hundred and eighty years, and to only 1 earthquake of magnitude 5, which is severe enough to give warning. ... the magnitudes have increased over the years and the clustering, repetitive nature of the activity is even more critically important."* (J. Robert Janes. author *Geology and the New Global Tectonics* pers.com.10/10/12.)

We went on to say, *"In this regard, we note that on May 24th 2000 a mild earthquake shook the Pickering region and neighboring areas -the fourth in 18 months."* (Federal Standing Committee on Energy, Environment and Natural Resources report : *Canada's Reactors, How Much Safety is Enough?* 2000 pg.12 .)

We also noted *"a 1993 article by Dr. Arsalan Mohajer, of the University of Toronto, (who did early seismic work for OPG) which, was written as a result his study of the Rouge Valley and Lake Ontario over several years, and showed that the faults near Pickering, including under Lake Ontario, were active (Neotectonic faulting in metropolitan Toronto: Implications for earthquake hazard assessment in Lake Ontario region. GEOLOGY. The Geological Society of America. 1993.)"*

One further 2003 article by Dr. Mohajer and N. Eyles, clearly shows the lack of depth of the studies relied on by CNSC staff the nuclear community. In an article *"Analysis and reinterpretation of deformation features in the Rouge River Valley, Scarborough,*

Ontario, { which critiqued work, recommended by the 1997 Andognini NPAG, Nuclear Advisory Group, and done for OPG by Godin et al}, Dr. Mohajer and N. Eyles note that “PNGS (Pickering Nuclear Generating Site) was constructed adjacent to a major population centre (now more than 5 million people) in the late 1960s, largely in ignorance of local and regional geological conditions and well before the plate tectonic paradigm provided a model for basement evolution. The presence and significance of major bedrock linaments, such as the Central Metasedimentary Belt Boundary Zone (CMBBZ) that passes **directly under PNGS**, together with several other structures that intersect below Pickering, was not then known.

Today such structures are recognized as being defined by persistent earthquake activity (Mohajer 1991, 1993, 1995 Wallach et al 1998) and a magnitude 3.1 earthquake occurred within 3 kms of PNGS on May 24th 2000. Ten smaller magnitude earthquakes have been recorded in the last decade along the structure between Niagara and Pickering by the seismic networks of the Geological survey of Canada and the United States Geological survey. The more recently constructed Perry nuclear plant in the USA was temporarily closed in 1986 by a magnitude 5 temblor along the same CMBBZ structure. **The local community has every right to be concerned about the presence of an aging nuclear reactor in their midst.** (emphasis added) 3. (ibid)

The article goes on to say that “**Unfortunately, Godin et al (2002) miss much of the current literature on the subject and their interpretations are not in accord with present understanding.**”, (. National Research Council on its May 2003 Research Web site) and further notes that Godin et al could have used much more relevant and extensive materials coming out of provincial waste management exercises during the 1990s . (emphasis added)

This latter statement by Mohajer and Eyles, most clearly shows that it is not just “*independent*” experts that are needed, but also that work done for a nuclear organization such as OPG, NWMO and Bruce Power by what they term “*independent*” scientists, needs to be critiqued by other arms-length “*independent*” scientists.

Precautionary Principle re Tritium Standards – Another Area of Expert Differences

It is the view of PCWO that in responding to presentations at the Darlington hearing regarding the need for stronger tritium release into water standards, staff clearly reflected the nuclear industry viewpoint, which sees no problem with the pollution of our waterways with tritium. In this case, staff member Dr. Thompson stressed the point that the much tighter standards in Europe and the USA, and the 2009 Ontario Drinking Water Advisory Committee (ODWAC) recommended standards of 20 BQ/L were “*just guidelines*”. {Transcript. Darlington .December 3rd, 2012 page 292}

This is avoidance in the extreme. The recommendations for the development of proper precautionary standards in Ontario has been a very lengthy process, with the nuclear industry being dragged to the edge of the cliff but not pushed over it by the political actors.

As PCWO wrote in its 2008 brief to the Ontario Drinking Water Advisory Committee, the alarms were sounded in the early 1980s, when Environment Canada noted “*large and growing discharges of tritium*” and their studies showed that there would be ever increasing amounts if reduction strategies weren’t introduced e.g. storage in heavy water to permit gradual decay of tritium, and a tritium reduction facility (TRF.)

The resultant Environment Canada 1984 “*Draft Code of Practice*” proposals were opposed by the nuclear industry and nothing was attempted until 1990, when a tritium reduction facility (TRF) was established at Darlington. Since then though, the TRF mainly just helps keep Darlington, Bruce and Pickering below the discharge limits most of the time.

By 1994 public concerns had continued to grow, as evidence showed that radioactive tritium releases of a very large magnitude were occurring too often e.g. the August 1992 tube break at Pickering caused the release of 2300 Tbq. Into Lake Ontario, and most specifically Ajax residents were worried about a water intake expansion nearby. After significant public hearings, which pointed to a very serious problem and the importance of stronger standards, the Ontario Advisory Committee on Environmental Standards (ACES) recommended an immediate reduction of the Ontario Drinking Water Objective from 7,000 Bq/L to 100 Bq/L and a five year phase in to the lower limit of 20Bq/L. {A Standard for Tritium: Recommendation to the Minister of Environment and Energy .May 1994. Page 28.paragraph 1}

The ACES report also drew attention to the fact that stronger recommendations than those of the government were needed as up to that point the standard of 7,000 Bq/L , which was consistent with the “ *international radiation protection community’s risk assessment practices*” was not adequate protection as these were “*based the lifetime risk level on only one year’s exposure.*” The report also noted that “*Extending this exposure over a 70 year life-span would add to the lifetime cancer risk, especially if the exposure occurred in one’s early years.*” {Ibid page 16}

Later, more alarming warnings regarding the dangers of tritium releases came from the 2005 BEIR V11 report , that there is “*no safe dose*” for radiation.

All of these factors and other scientific information were considered by the Ontario Drinking Water Advisory Committee (ODWAC) in 2008 and helped form their 2009 recommendation that the drinking water regulation for tritium be tightened so as to allow only 20Bq/L per year . And recently, on December 3rd it was mentioned by interveners that there were good recommendations regarding a precautionary role for

CNSC re tritium from the Joint Review Panel on the Darlington New Build .
{Transcripts.Darlington.December 3rd 2012. Durham Nuclear Awareness.page }

Accordingly, it is quite startling that CNSC staff's position still stands in stark contrast to this body of expertise, information and recommendations over the past 30 years .

PCWO considers it most unfortunate that the Provincial government has not acted since then to follow through with the ODWAC recommendations and we recognize that it is not the Commission's, nor CNSC staff's, task to make these political decisions. However we feel strongly that it is incumbent on CNSC and staff to heed the warnings from so many sources, starting in 1983 right up to this hearing , and to use the information that has been available for so many years, rather than evading it with no greater reference than to obviously outdated International Standards, which they help to set, often taking a leadership role.

Conclusion

To conclude, PCWO draws attention to the CNSC April staff report regarding the Pickering life extension application with theirs and OPG's proposed safety improvements. Again, there is the usual go-ahead and just a cautionary note regarding the build up of *"black deposits on Unit #1"* which *"CNSC is monitoring very closely to resolve this issue"* and has *"imposed a 3% reduction from full power to preserve the safety margins and until there is a better understanding of the cause and effect of the deposits Unit 1 is presently in guaranteed shut down state as its planned outage has been extended until February."* {January 21st. CDM –Pickering Renewal CNSC Staff .pdf.Subsection 3.3.2 and pages 37and 38.}

While this latter action is meant to be reassuring, it is also a disturbing indication of the Staff's determination to press forward with the life extension of Pickering to 2020 regardless of the signals, and their avoidance of fully using the precautionary principle to avoid undue risk to the public when making recommendations.

Even the average person with any sense would see, in the case of Pickering life extension, this is like dealing with an old car where the brakes are giving out, the tires are on their last tread, the transmission is faltering, and the body is rusting through in places i.e. One is courting disaster- in this case the *"worst case"* scenario of a nuclear melt down !

Therefore PCWO requests that the Commission use its power under the Nuclear Safety Control Act to refuse OPG's application for a Pickering B licence renewal , in order to better protect the public and the environment from further unreasonable risk due to the continued operation of this aging and troubled plant, located in the urban heartland of southern Ontario, next to Lake Ontario, close to many millions of people on both sides of the border and over an active geologic fault line.

Background:

1. Provincial Council of Women of Ontario (PCWO) was formed in 1923 with a mandate to work together towards the betterment of women, families and society . Currently our membership includes many thousands of Ontarians, through our 12 Provincially Organized Society 5 Local Councils and 1 Study Group Affiliated Members. PCWO develops its many policies through their broad circulation to members, voting in these groups and then adoption by majority vote at the PCWO Annual General Meeting. Subsequently policies are taken to the Government at Queens Park each year at the Semi-Annual Meeting. PCWO is one of six Provincial Councils of Women, who are members of the National Council of Women of Canada (Estb. 1893), the others being Ontario, Quebec, Manitoba, Saskatchewan, Alberta and British Columbia.

2. Selected PCWO Involvement to Date with Nuclear issues

In 1996 and 1997 PCWO presented to the 'Seaborn Commission, and as noted in the Panel's final report (February 1998 page 52) PCWO stated "*The public at the end of phase 11 {technical hearings} was left with a feeling of grave unease. The best that could be said in favor of AECL's concept was stated by SRG- that it could, might, should be doable.*" The Seaborn Commission reflected our societal concerns by ruling that while it was scientifically doable it was not societally acceptable, and that AECL should correct the many flaws (127); redo the consultation process ; and most importantly set up an arms-length (from the nuclear industry) panel to help develop a new plan.

PCWO has also been involved in the Nuclear Waste Management Organization's '300 Year Adaptive Phased Management Approach' consultations, and between 2007 and 2008 we had intervener status at the *Ontario Energy Board (OEB) Hearing on Ontario Power Authority's (OPA) Integrated Power System Plan (IPSP)* with the Board - delegated responsibility to deal with the life-cycle costs and risks of nuclear waste management.

In 2008 PCWO commented to the Ontario Drinking Water Advisory Committee (ODWA) on the need for Ontario to update its regulatory standard for releases of tritiated water, to reflect the 1994 recommendations of the Advisory Committee on Environmental Standards (ACES) that these be reduced from 7,000 Bq/L to 20 Bq/L by 1999.

In 2010 both PCWO commented to CNSC regarding the Bruce Power licence application to transport radioactive steam generators from the Bruce site to Sweden,

and on April 5th 2011 PCWO , supported by NCWC, urged the CNSC Joint Review Panel Commission re: the Darlington Environmental Assessment Site Preparation “ *to declare that the application is premature as there is not enough evidence to prove its merits*”

On April 5th 2011 PCWO commented to CNSC on the Darlington Environmental Assessment Site Preparation

On December 4th 2012 PCWO presented a submission to CNSC regarding the Darlington life-extension and rebuild.

THE PROVINCIAL COUNCIL OF WOMEN OF ONTARIO (PCWO)

Established 1923

To : The Toronto Board of Health

From: Edeltraud Neal, President of the Provincial Council of Women of Ontario

**Regarding: Comments on Item 2018. HL26.1 Reaffirming City of Toronto as a
Nuclear-Weapons-Free Zone**

April 15, 2018

The Provincial Council of Women of Ontario,(PCWO) a member-funded non-governmental, non-partisan, non-sectarian organization, has been working for 95 years to advance the status of women, and improve and enhance the lives of their families and of their communities in Ontario.

PCWO considers a healthy and safe environment for all Ontario citizens and their families to be of the utmost importance, and we, along with the National Council of Women of Canada (NCWC), have raised societal and scientific concerns about the dangers of nuclear power for many years, beginning with a 1955 resolution warning of the potential dangers of “*atomic energy*”.

Since then, PCWO, as a federated Member of NCWC, has kept a vigilant eye on the seemingly unchecked expansion of the nuclear industry in Ontario and presented many briefs to the provincial government, and to a wide variety of Boards, Agencies and Commissions regarding the dangers nuclear projects pose to the environment and to public health and safety e.g. the attached 2013 brief regarding a Pickering life-extension application 1 .

Of all these potentially disastrous nuclear initiatives, those executed and planned for the aging and poorly designed Pickering nuclear reactors pose the greatest immediate danger should a critical accident happen, due to mechanical breakdown, human error or nefarious action. And, it is clear, as nuclear experts such as Dr. Gordon Edwards, have attested, that the people of Toronto, particularly those within a 40 km radius, are the most critically at risk and stand the most to lose .

Therefore , PCWO is pleased that the City of Toronto, has reaffirmed its status as a Nuclear Weapons- Free Zone, and although we are unable to make a presentation at the April 16, 2018 Board of Health meeting re item 2018.HL26, we feel our knowledge of nuclear issues and long history of interventions in a wide spectrum of nuclear applications, the most recent being our attached comments on the deficiencies of the (Draft) Provincial Nuclear Emergency Response Plan 2., may give the Board of

Health members some sense of the general public's concerns and expectations in this crucial matter.

The key environmental principle for PCWO, is that elected officials, their staff, and advisory Boards who are responsible for the wellbeing of the public, should make decisions based on the '*precautionary principle*' and act on them promptly.

As a first step, given the many dangers posed by the Pickering nuclear station and its current request for another life extension, PCWO would ask that the Board of Health immediately urge the City of Toronto to follow-through on the actions proposed by Dr. Gordon Edwards. The most important and immediate one should be, to "*take steps to hasten the shut-down of the Pickering nuclear generating station (NGS)*" as it is well past its projected lifetime, contains over 400,000 irradiated fuel bundles in its spent fuel pools, and provides a potential target for any planned hostile attack.

Our thanks for this opportunity to comment on this important City of Toronto "reaffirmation of its status as a Nuclear Weapons –Free Zone" and if the Board members have any questions please feel free to contact either myself at edeltraud.neal@gmail.com --- or Gracia Janes, PCWO Environmental Advisor, gracia.janes@bellnet.ca or 905 468 2841.

Background :

1. 2013 brief regarding a Pickering life-extension application.
2. (Draft) Provincial Nuclear Emergency Response Plan, July 28, 2017 EBR 1113-1500

(416-863 1209)

----- Forwarded message -----

Julie Lavertu at the City Clerk's office has kindly provided the instructions below on how to register on-line to speak in person or to make written submissions for the April 16 Board of Health public hearing on the dangers of nuclear weapons and radiation fallout.

Please register and let me know whether you will be making a submission to this hearing so that I can include this information in a press release going out on Wednesday. Best wishes, Anton Wagner.

Toronto City Council accepted Toronto Board of Health recommendations at its meeting on 1 April 1982 and voted to hold a referendum on worldwide nuclear disarmament in the November 8 Municipal election. 78% of Torontonians voted yes to support nuclear disarmament by all nations to the ultimate goal of a world free from nuclear weapons. In 1983, City Council designated Toronto a Nuclear Weapons-Free Zone and approved the building of the Peace Garden on Nathan Phillips Square at a cost of \$480,000 [over \$1 million in 2017 dollars] to commemorate the City's 150th anniversary.

Thirty-five years after its 1982 recommendations to City Council, the peace, faith and environmental groups are calling on the Board of Health to re-examine the current nuclear weapons dangers and to advise Council what the City can do to protect its citizens.

Hello Anton:

Thanks for your e-mail message, and for letting me know that you are coordinating speakers and written submissions on Item HL26.1, Re-affirming City of Toronto as a Nuclear Weapons-Free Zone, which will be considered by the Board of Health during their meeting on Monday April 16th at 1 p.m. in Committee Room 1, 2nd floor, at Toronto City Hall ([100 Queen Street West](#)).

1) How to register as a deputant

- *Visit the following website: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.HL26.1>.*
- *Click on the "Request to Speak" button in the top left-hand corner.*
- *This will automatically generate an e-mail message to us with the information that we need to register speakers.*
- *Alternatively, individuals can e-mail boh@toronto.ca and advise us that they would like to speak on Item HL26.1, Re-affirming City of Toronto as a Nuclear Weapons-Free Zone. To be registered as speakers, individuals need to provide us with their name, organization (if applicable), mailing address, telephone number, and e-mail address.*

2) How to submit written comments

- Visit the following website: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.HL26.1..>
- Click on the "Submit Comments" button in the top right-hand corner.
- This will automatically generate an e-mail message to us with the information that we provide to individuals who submit comments.
- Alternatively, individuals can e-mail boh@toronto.ca and provide us with their comments on Item HL26.1, Re-affirming City of Toronto as a Nuclear Weapons-Free Zone. Individuals who submit comments need to provide us with their name, organization (if applicable), mailing address, telephone number, and e-mail address.

Please let me know if you have any additional questions or concerns.

Regards,

Julie

Julie Lavertu
Administrator
City Clerk's Office, Committees and Boards Team
City of Toronto
City Hall, 10th Floor, West Tower
[100 Queen Street West](#)
Toronto, ON M5H 2N2

416-397-4592
julie.lavertu@toronto.ca

toronto.ca/council