



Oral presentation

Exposé oral

**Written submission from
Judith Fox Lee**

**Mémoire de
Judith Fox Lee**

In the Matter of the

À l'égard de

**Ontario Power Generation Inc. -
Darlington Waste Management Facility**

**Ontario Power Generation Inc. - Installation
de gestion des déchets de Darlington**

Application to Renew the Class IB Waste
Facility Operating Licence for Ontario Power
Generation in Darlington, Ontario

Demande de renouvellement du permis
d'installation de déchets de catégorie IB pour
Ontario Power Generation à Darlington
(Ontario)

Commission Public Hearing

Audience publique de la Commission

January 26, 2023

26 janvier 2023

December 5, 2022

Dear Senior Tribunal Officer, Commission Registry, Canadian Nuclear Safety Commission:

This is my application to intervene in the Public Hearing on Ontario Power Generation's application to renew its Class 1B Darlington Waste Management Facility operating licence by way of both written submission and oral presentation, by Zoom, on either January 25 or 26, 2023.

Judith Fox Lee

Here is a précis of my submission points to be elaborated at the hearing:

1. I strongly suggest that OPG's application for licensing renewal be dealt with by a temporary extension of its current licence for a period of one year. The reason for this is that the Federal Government of Canada is currently in the process of modernizing Canada's outdated radioactive waste policy, which is expected to be released in early 2023. This is a much more valid and common sense approach, because hurrying to produce a new 10 year licence literally just before the release of the updated and improved policy is available makes no sense at all. What if the new policy has bold and important changes which are not reflected in this 10 year licence? Then the safety of the Canadian public will be unnecessarily compromised for that entire period. The Canadian government has said that this revised policy is very important and needed to ensure that we have a strong radioactive waste policy that meets *international standards based on the best science available*, and which closely reflects *the values and principles of Canadians*. Therefore, it is urgent that all new licencing of Canadian nuclear waste management facilities in the current time frame be put on temporary hold or, alternatively, be given temporary existing licence-extensions to ensure that any new licences required will fulfill all the standards to be enshrined in this modernized policy.

2. Further to point 1, to truly meet point 1, Canada needs a new, independent regulator, or perhaps new regulations, policies and protocols governing our regulator, the CNSC, a requirement which might hopefully be included in the new policy. The federal government itself – despite being one of the largest generators and owners of radioactive waste – has, to date, abdicated its own responsibilities for managing its wastes and developing a national waste strategy by handing these responsibilities over to private sector operators, who currently have the luxury of operating in a policy void, guided only by their own profit motives and drive to expand their operations ad infinitum. Corporate industry actors clearly should not be the responsible bodies who determine the regulations to govern their own operations!. Canada, despite having ratified the *Convention on Nuclear Safety*, does not currently provide for *independent regulatory functions in respect of nuclear waste management*. Our regulator, the CNSC, reports through the Minister of Natural Resources, who is expressly charged with *promoting and utilizing nuclear energy* under the Nuclear Energy Act. The Convention says “Each Contracting Party shall **take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy.**” We are clearly not currently doing that, but maybe the new modernized policy will. To conclude, Canada needs an independent authority for

radioactive waste management. And Canada needs an independent regulator that is not captured by the industry and government bodies that promote and utilize nuclear energy. Suggesting that this licence renewal request be put on hold or instead, that the OPG instead be given a short term extension to its current licence would reflect the need to wait and see what new standards may be required in licensing requests at our nuclear waste facilities.

3.The regulator (CNSC) should require that licence applicants provide information about wastes that would result from the activity that they are asking to have licensed. This is a requirement of the General Application Requirements of the General Nuclear Safety and Control Regulations, section 3 (1) (j): An application for a licence shall contain the following information: the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, *including waste that may be stored, managed, processed or disposed of at the site of the activity to be licensed*, and the proposed method for managing and disposing of that waste. (Emphasis mine). The CNSC needs to enforce this regulation and require that comprehensive lists of highly specific and detailed waste description information is contained in this license application.

Otherwise it becomes a regulatory failure on the part of the CNSC. In section **3.11.2 Discussion**, from the CMD 23-H9 Date signed 27 OCTOBER 2022, submitted by CNSC Staff it states that "OPG maintains a waste management program that is implemented at the facility and meets the requirements of the GNSCR, CSA Standard N292.0-19, General principles for the management of radioactive waste and irradiated fuel, and CSA Standard N292.3-14 Management of low- and intermediate-level radioactive waste. Regarding Waste Characterization, minimization and management practices. During the licensing period, OPG continued to employ effective programs for the waste characterization, minimization, and management practices at the facility. Minimal low-level radioactive waste is generated during operations at the waste facility. OPG uses waste management procedures to ensure that the low-level radioactive waste generated at the facility is separated properly from clean waste. The low-level radioactive waste produced is sent to Darlington Nuclear Generating Station for segregation as necessary and eventually transported to Western Waste Management Facility for management. There are no intermediate or high-level radioactive wastes generated at the [waste management] facility. During this licensing period, CNSC staff observed OPG's minimization and characterization of low-level radioactive waste by segregating "likely-clean" and active waste throughout the facility via compliance inspections. CNSC staff determined that these activities were compliant with the waste minimization and characterization requirements of CSA N292.3 Management of Low and Intermediate-Level Radioactive Waste." However, what the licence request and CNSC staff critically failed to do is the point at GNSCR 3 (1)(j) cited above, but worth repeating: **An application for a licence shall contain the following information: the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, *including waste that may be stored, managed, processed or disposed of at the site of the activity to be licensed*, and the proposed method for managing and disposing of that waste.** We see that OPG and CNSC only addressed the wastes actually produced in the waste facility, but not the wastes brought in to be stored there. This significant gap must be remedied before any new licence can be granted to OPG for these waste management facilities.

4. From the nine fundamental principles of radioactive waste management of the International Atomic Energy Agency (<https://www-pub.iaea.org/MTCD/publications/PDF/rwmp-3/INTRODUCTION.pdf>), I find the following three principles particularly germane to this licensing renewal request:

Principle 3: Protection beyond national borders: Radioactive waste shall be managed in such a way as to assure that possible effects on human health and the environment beyond national borders will be taken into account. Locating these facilities on the shoreline of Lake Ontario -- means waste leaks can influence both the Canadian and American sides. To wit, The International Joint Commission's Great Lakes Water Quality Board is calling for OPG's storage facilities to be "hardened" and located away from shorelines to prevent them from becoming compromised by flooding and erosion. (Great Lakes Water Quality Board, Decommissioning of Nuclear Power Facilities in the Great Lakes Basin, (November 2021), page viii.)

Principle 6: National legal framework: Radioactive waste shall be managed within an appropriate national legal framework including clear allocation of responsibilities and provision for *independent* regulatory functions. The CNSC and its responsible ministry, Natural Resources, are both also tasked with nuclear energy promotion and support. This is clearly not compatible with the critically urgent concept of **independent regulation!** Please see my point 2 above for full details on the validity of waiting for an improved national legal framework, in the new federal nuclear waste policy framework due out in the first half of 2023.

Principle 9: Safety of facilities: The safety of facilities for radioactive waste management shall be appropriately assured during their lifetime. The proposed future construction of 2 additional storage structures for used fuel dry storage containers is not meeting the highest level of safety standards for such structures currently being met internationally. OPG's licensing proposal is to build conventional, commercial storage buildings. In Germany, in contrast, the newest safety standards require on-site, above-ground, attack-resistant, reinforced concrete vaults for the so-called interim storage of nuclear wastes. The concrete walls and roofs of these vaults are approximately 1.2 and 1.3 metres thick respectively. The six German nuclear stations with on-site above-ground, attack-resistant, reinforced concrete vaults for the interim storage of their spent nuclear fuels are: Brunsbittel, Brokdorf, Krummel, Unterweser, Emsland and Grohnde. Email from Dr. Wolfgang Botsch, TÜV NORD GROUP to Jack Gibbons (October 7, 2020); and Bruno Thomauske, Realization of the German Concept for Interim Storage of Spent Nuclear Fuel – Current Situation and Prospects (2003). **I believe that the Canadian people fully deserve and expect, by our very values and principles (that the Canadian government has expressed as important to have reflected in our new nuclear waste policy), to have the very best protective building and structure standards for our nuclear facilities in the world. Why would we want or accept anything less? The CNSC should uphold these highest scientific and engineering standards on behalf of the Canadian people, for our**

explicit health and safety, now and in future. According to reports prepared for Ontario Power Generation by CTECH Radioactive Materials Management, the total capital cost of building above-ground, attack-resistant, one-metre-thick reinforced concrete vaults at the Bruce, Darlington and Pickering Nuclear Stations combined would be approximately \$ 1 billion. OPG has more than enough funds to cover the cost of this shift to an interim solution that will provide much greater safety and security over the coming decades. For the safety of all Ontarians and people living throughout the Great Lakes Basin, CNSC should require OPG to store its low, intermediate and high-level radioactive wastes in aboveground, attack-resistant, reinforced concrete vaults at its nuclear stations, and in this instance, specifically, Darlington. on the shores of Lake Ontario.

5. Minor but interesting consideration about those name changes!! Talk about *doublespeak*! For those who need a reminder, "Doublespeak" is the word coined by George Orwell in his novel *1984* to refer to government language that deliberately obscures, disguises, distorts, or reverses the meaning of words. Doublespeak may take the form of euphemisms (as in the current OPG example), in which case it is primarily meant to make the truth sound more palatable. It may also refer to intentional ambiguity in language or to actual inversions of meaning. At this particular moment in political times, we have all been victims of falsified news in general and in the environmental sphere, of *greenwashing*. Those Canadians who value our democracy have seen it eroded by these trends. We must ask what does the OPG stand to gain by renaming its Nuclear Waste Management (NWM) division with Nuclear Sustainability Services (NSS) done in Q4 2021? Corporate information states that "NSS safely accepts, transports, processes and stores nuclear by-products, while embracing the three Rs - reduce, reuse, and recycle. Nuclear Sustainability Services is a name that is aligned with OPG's Climate Change Plan. In this application, Nuclear Waste Management (NWM) division will be replaced with Nuclear Sustainability Services (NSS) and the Darlington Waste Management Facility will be replaced with Nuclear Sustainability Services – Darlington (NSS-D)." To me personally, it is yet another case of greenwashed doublespeak. It handily removes the entire, unsolved ultimate problem of nuclear waste management, and makes it sound so positive and innocent, just like reusing or recycling! So innocent sounding, and masking that we are talking about the most toxic, carcinogenic, teratogenic and mutagenic substances known to humankind. In this regard, I may also provide a summary of the biological hazards of nuclear waste products which I believe is important for nuclear regulators to be reminded of often -- because when you work in a given field for years on end, it is all too easy to forget the actual dangers involved. And this becomes doubly important when the regulators are tasked with guarding public health and safety in the present time and for future generations. Let CNSC not forget that their bottom line is about guarding these super toxic materials in the ***safest manner humanly possible. Any lesser treatment is unacceptable.***

6. Reserved for any further areas for discussion that I can work on in the interim to help advise CNSC toward making the truly best decision in this licensing renewal request from OPG.

Thanks very much for your timely consideration of my request to intervene in this hearing, and I look forward to your response.

With genuine concern,

Judith Fox Lee