Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

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Written Submission from Gordon Dalzell

Mémoire de Gordon Dalzell

In the matter of the

À l'égard du

Regulatory Oversight Report for Canadian Nuclear Power Generating Sites for 2024

Rapport de surveillance réglementaire des sites de centrales nucléaires au Canada : 2024

Commission Meeting

Réunion de la Commission

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Canada

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January 27, 2026

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To Whom It May Concern:

SUBJECT: Regulatory Oversight Report for Canadian Nuclear Power Generating Sites: 2024

This letter is to provide my comments and recommendations on the review of the Regulatory Oversight Report Canadian Nuclear Power Generating Sites 2024

Please keep in mind that these comments and responses to the many topic areas are prepared from a community member's perspective and in this case an interested party involved in the environmental movement who follows the nuclear energy issues.

The points raised in my submission of a critical nature, are raised to assist the regulator to continue its oversight vigilance and transparency. This ROR does raise questions where answers are not always complete for the public to understand. I continue to have the outmost confidence in the oversight work of the Canadian Nuclear Safety Commission members and staff. Even with all the issues raised in my submission, it does not preclude my fundamental conclusion that all these nuclear power plants in Canada are safe and the public is not at risk from them.

I trust that the points raised in my submission will be discussed with both CNSC staff and Commission Board members. I would also appreciate a written response to the point raised in my submission. The nuclear technology is a very complex science, and as a community member do stand to be corrected if my interpretation of the information highlighted in submission needs clarification to assist the public in this review.

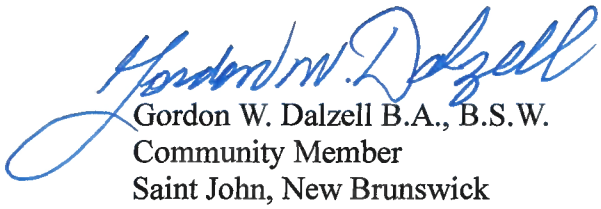
Background information of commentator:

This writer has been following the local nuclear industry over the years specifically the Point Lepreau Nuclear Generating Station (PLNGS). My past involvement has included formal intervenor status at the licensing renewal for this facility (PLNGS).

Additionally, I have participated in the public review of Oversight Report of Nuclear Facilities in Canada by making a written submission to the general meeting of the CNSC for several years. As well, this writer is co-founder of the Saint John Citizens Coalition for Clean Air an environmental public interest group advocating for clean air in our local and regional area of Saint John, NB.

I appreciate the opportunity to participate, and I thank you for taking my comments under review.

Respectfully submitted,



Gordon W. Dalzell B.A., B.S.W.
Community Member
Saint John, New Brunswick

Compared to previous years, the level of details appears to have been reduced in favour of a more concise easier to read version titled on page 7 - plain language summary. One cannot help but use the analogy of the Readers Digest format, but such a comparison is hard to avoid. There's no question the document adequately covers the key oversight, activities and a safety performance of nuclear power generating sites in Canada for 2024

For the general public and those not at all engaged with nuclear power generation, this document may very well be helpful and informative as written without a lot of technical details.

That being said, this regulatory oversight report was prepared and written by highly skilled and trained regulatory officials who has an in-depth understanding of nuclear generating sites. This ROR is written and prepared for the members of the Canadian Nuclear Safety Commission, who are themselves most knowledgable of the nuclear operations of these complex facilities.

This community member cannot keep but wonder if this content of this document is sufficient for the high-level skills of the commissioners who are much more knowledgable than the general public. The question is whether the content as presented is sufficient for that type of technical oversight responsibilities, the commissioners are appointed to undertake. This writer cannot, but wonder if there is another more detailed technical documentation made available to the commissioners that is outside the public review, especially since they are really the primary target audience of this regulatory oversight report.

No doubt it could be agreed that the commissioners do in fact have the kind of detailed information you need to carry out their responsibilities found in their various appendices A to F. These appendices are part of the ROR but this type of detailed content is covered in these appendices not within the regulatory oversight report, which covers the various topics in a more scaled-down simplistic version.

This writer would have preferred a more significant information in these appendices incorporated into the general report. The question is whether the commissioners have access to other information apart from what is in the presented in the ROR including the appendices.

It is recognized that certain security related information is outside the public access for good reasons. Even there is the general public, especially those living within the vicinity of the nuclear plant receiving adequate information on the safety /security area to be reassured they and thousands of others are safe and secure. this writer's, grandchildren, getting sufficient information on safety security areas to be assured, and millions of others are safe and secure.

In the areas of security matters, we don't have all the information only the commissioners would have access to this type of information.

To conclude on this issues of the ROR format, an information content all boils down to this question, are Canadians really getting the kind of information they need to maintain confidence in the safe operation of these nuclear generating sites - many of which are located in highly populated area specifically in Southern Ontario.

To be more specific this writer will now focus on the areas of radiation to the public and to the workers at the nuclear power plants and waste management facilities as were reported in the plain language summary that were below regulatory limits.

The assumption here is whether those current regulatory limits are health protective. The question for this writer is whether these current radiation emission limits are associated with elevated cancer risks, particularly among older adults. This question is raised after the recently released research study published in the Environmental Health Journal. The title of this research study is "Residential proximity to nuclear power plants and cancer incidences in Massachusetts, USA from 2000 to 2015. Cancer risk may increase with proximity to nuclear power plants | Harvard T.H. Chan School of Public Health

Although the study coverage within 120 km radius within this US states where seven nuclear facilities exist. One has to question whether similar study results would apply to the geographical area in Ontario, where there are even more nuclear reactors within a 20-km radius.

In reading the ROR, an oversight report focused on safety areas, there is no reference to any health studies on the potential or real health risk of cancer associated with residential proximity

to nuclear plants in Canada. Now this is not the only reference linking radiation from nuclear power plants and cancer links. There is proof galore according to one scientist, not employed by the nuclear industry that it is dangerous to human health. The recent publication by Ian Farley and Cindy Falcons, titled: *The Scientist Who Alerted US to the Danger of Radiation* makes this clear and concerning. https://eipcontents.s3.eu-north-1.amazonaws.com/master/samples/978-1-80441-193-3.pdf?utm_source=chatgpt.com

The assumption is there are safe levels of radiation. The current radiation doses to the public at nuclear power plants may be "below regulatory limits" but nowhere is this 2024 ROR report does it conclude such radiation levels are safe and will cause no harm to people within their vicinity of these nuclear power plants.

This writer doesn't believe everything one reads for sure, but when more research emerges on the health risk associated from these facilities on populations, it is now time for the CNSC specifically the appointed commissioners to order further study apart from the CNSC study completed in 2013 - ***Radiation and Incidence of Cancer Around Ontario Nuclear Power Plants From 1990 to 2008 (The RADICON Study).***

This reviewer is of the opinion there is a need for continued research by the CNSC. Further studies should refine exposure assessment using enhanced direct radiation monitoring dispersion modelling and residential history data along with employ longitudinal designs to better evaluate lacency and site-specific cancer risks. Further recommendations will include strengthening emissions, controls. Improving, environmental monitoring and prioritizing research and surveillance within approximately 25 to 30 km of these Canadian nuclear power plants. These steps will be essential for advancing evidence-based protection of nearby communities
The issue of radiation doses from emissions are within the scope of the ROR as noted in the first paragraph that describes the regulatory oversight and safety performance of nuclear power plants in Canada.

Since there are multiple plans to increase and refurbish existing nuclear plants in Canada, the question whether the current radiation doses to the public even if believed to be below current regular limits are health protectives, and not linked to causing adverse health impacts specifically cancer, to surrounding population near these nuclear power plants.

The 2024 did not provide health impact reference to satisfy the public needs to be informed whether the current radiation doses are stringent enough to prevent cancer of residence within the vicinity of these nuclear power plants.

These needs to be some reference relating to existing based health impact. It is recommended that an appendix within such information could provide reassurance to those living in the area of these sites. The timing of such updated information is important, considering recently published research such as the one cited above in the Environmental Health Journal Health Alward et al Environmental Health 2025.

This writer, after reading these research papers is beginning to lose confidence on whether these radioactive emissions are safe, even though the ROR states on page 7, and other section states that “Radiation doses to the public and to workers at those nuclear power plants and the waste management facilities were below regulatory limits”.

Section 1.4.1.2

There needs to be an update at the upcoming public meeting on the status of New Brunswick Power Corporation and the ARC-100 reactor. https://tj.news/new-brunswick/opinion-too-early-to-give-up-on-n-b-small-reactors

The New Brunswick Ministry of Natural Resources recently provided the public with an update on the ARC-100 reactor development here in New Brunswick- that basically stated that New Brunswick will not be proceeding with the ARC-100 project development.

Section 1.6.2.3

Reporting reference to the Nuclear Safety and Control Act

This federal legislation was passed by Parliament in 1954.

Canada's original nuclear regulator **was created in the 1940s**, long before the *Nuclear Safety and Control Act* was passed in 1997.

Here's the timeline:

- **1946** — Parliament passed the **Atomic Energy Control Act**, which established Canada's first federal regulator for nuclear energy, the **Atomic Energy Control Board (AECB)**. The Act came into force on **October 12, 1946**, and the AECB began regulating nuclear activities under that authority. Canadian Nuclear Safety Commission+1
- The AECB served as Canada's nuclear regulatory body for over 50 years, overseeing nuclear safety, licensing, and control of atomic energy. Canadian Nuclear Safety Commission
- **1997** — Parliament passed the **Nuclear Safety and Control Act (NSCA)** on **March 20, 1997** to modernize nuclear regulation. Wikipedia
- **2000** — The NSCA came into force on **May 31, 2000**, and the **Canadian Nuclear Safety Commission (CNSC)** replaced the AECB as the regulator. Canadian Nuclear Safety Commission+1

So the first nuclear regulator in Canada was created in 1946**,**

It is time this outdated piece of legislation was updated and renewed, considering how old it is. Additionally, there is a renewal of nuclear generation with current and future plans for refurbishment of several nuclear reactors as well as plans for new facilities such as Darlington and Bruce's nuclear projects.

As well, two provinces Saskatchewan and Alberta are in the process of building nuclear generation capacity, such as small modular reactors. This Prime Minister identified nuclear energy development within the energy mix in the signing of the memorandum of understanding between the Government of Canada and Alberta in December 2025 https://open.alberta.ca/publications/mou-goc-goa-strengthen-energy-collaboration-build-stronger-more-competitive-sustainable-economy

The time is appropriate for the nuclear safety control legislation to be reviewed and to be overhauled.

Section 1.6.3 Periodic Safety Review

This reviewer would like to see this issue of any health impacts from current levels of radiation levels. It is my understanding that these PSR's do not include cancer level links between these nuclear power plants and the neighbourhood areas where these plants are located.

The kind of research cited above in my submission should be part of these PSRs. Question is will they?

Section 1.7., 1.7.2 and 1.7.3

From a community members perspective, who lives 40 km from the Point Lepreau Nuclear Generating Station, was reassuring to read that in 2024 there were over 154, 0446 hours carried out working on activities related to verifications along with 194 inspections report completed in 2024. This writer recognizes and values the high-level of regulatory oversight by the CNSC inspection staff. Compared to other large industrial complexes such as the oil and gas petroleum refinery facilities, there is a distinct difference, considering these industries have the potential for catastrophic events that could impact thousands of people who live in the vicinity of these other industrial complexes. This writer observed and experienced the impact from one such facility a few years ago. This writer recognizes and values the stringent oversight regulatory responsibilities of the CNSC. This writer has full confidence in this Federal regulatory body to keep us safe.

Section 1.7.4 Event Reporting

This section needed to provide a list of the kind of reporting requirements for nuclear power plants within this section instead of citing REGDOC 3.1.1. Table does list the total number of events reported to CNSC staff in the last three years, but there is no explanation as to what those events were. I understand that the utilities post their event reports on their website, which gave me the opportunity to ask questions about the event of interest. Another appendix could be added to inform the public what were the specific event licensees reported to the regulators. Even if you look up REGDOC 3.1.1, one does not know which one applied to each specific nuclear power plant listed in Table 3 on Page 19. This writer was able to obtain information about the

event related to PLNGS as they are listed on their website and also in discussion with their public disclosure protocol representative.

Section 1.7.5 Actions from the Commission of the CNSC.

This reviewer welcomes this section where a report is generated that includes information generated by the Commission from previous regulatory oversight, licensing hearings. This kind of reporting is excellent. Hopefully, this kind of report will be a regular component of future RORs.

In listening and watching the public meetings/hearings of the Commission, this writer was surprised to see on Table 5 page 20, there were only two requests from the Commission listed. Is that all? This writer expected to see more than two requests.

This reviewer among others over the years have made written submissions on the RORs raising issues of concern and questions. It has been noted that there have not been any formal written responses made available within the ROR process that is readily available to not only the person or groups making such submissions, but to the public. These ROR public hearings are part of the public review process, and this writer would like to see the CNSC presents their responses to those who have made written submissions presented in the public meetings or hearing. Yes, they are acknowledged, often some comments and questions are directed to CNSC staff and licenses with verbal responses provided. As part of the public meeting, CNSC staff needs to prepare a report summarizing the public comment submissions on issues of concerns and questions.

This response report should be included as part of the public meeting process to allow the commissioners to respond themselves.

It is my understanding such a response report is prepared by CNSC staff, but it is not part of the public meeting or attached to the Record of Proceedings. When intervenors spend time and efforts to prepare the submissions, the CNSC needs to make their written responses available to the person or group making that submission. This writer should point out that such response reported are in fact, prepared, and the commissioners hearing the meeting are given those responses in a form for reports, but they are not readily available.

A couple years ago, this writer made such responses report on my submission. Only after considerable efforts and requests did the CNSC respond by sending this writer, the CNSC response document to my issues of concern and questions.

It is recommended that the CNSC prepare a summary public engagement report that includes written responses to the issues raised by public interveners. Everyone who made a submission should be provided with the CNSC's response document.

It is understood that such a document is already prepared for Commission members to support their consideration of public issues related to the ROR and associated staff responses

This writer would recommend further that such a summary of public engagement being incorporated into Section 3 Consultation Engagement in Public disclosures – see Section 3.1.2 – Engagement with Indigenous Nations and Communities on the NPGS ROR

Commentary on Section 2

2.1 Darlington Nuclear Generating Station.

My comments will highlight the key issues of concern on the safety performance rating for each SCA at each nuclear power plants and waste management facility as reported from CNSC compliance verification activities.

From a CO2 avoidance perspective, it was reassuring to read on page 24 under Refurbishment at Darlington that Unit 1 returned to commercial operation in November 2024. Further, Unit 4 is expected to begin the return to service which is currently estimated to be in 2025 and returned to commercial operation in early 2026

One of the critical areas of importance to this reviewer is the area of Human Performance Management. One of the Safety Control areas included for all these nuclear power plants covered in this regulatory oversight report. As a past professional social worker who practice for 30 years, this writer is all too aware of all the human conditions social problems both past and present life circumstances can affect ones day to day responsibilities where within the family, workplace and community.

This human performance management area is of critical importance in the safe operations of these nuclear power plants.

One specific area under REG DOC 2.2.4 –Fitness for Duty Volume II: Managing Alcohol and Drug Use is one that will continue to be managed. It is noted that there were seven findings (three of which of low safety significance for which OPG is implementing corrective actions). The question is what were the other four and were they of low safety significance as well?

This section (a) does not specifically describe what the seven findings involved and no indication what the level of safety significance was. Hopefully, these four out of the seven were not in the medium or more above rating of safety significance.

They lack of more comprehensive information in this more streamline, regulatory oversight report digest version is an example of incomplete safety related information found in this scaled down version of the 2024 ROR compared to previous years. This writer preferred the ROR, formats of past years.

This writer recommends that the CNSC provide an update on the implementation of management of alcohol and drug use programs currently in place at all the nuclear power plants. This is particularly important and relevant now that mandatory drug testing is now being mandated and authorize by the Supreme Court of Canada. This needs to be presented to the Commissions at the March 2026 public meeting.

Section 2.1.3 Operating Performance

There is no reference to annual compliance report in contrast to such a report identified in the Pickering waste management facility on page 65. Perhaps these annual compliance reports are only required for the waste management facilities. If that is the case, such a report should apply to all of the nuclear power plants. There needs to be a digital link available so the public can readily review such compliance reports.

Section 2.1.6 Fitness for Service

This writer was looking for results in the aging Management areas as many of these not yet refurbished nuclear power plants were built many years ago with cables subject to deterioration overtime. In reviewing past regulatory oversight reports, this writer recalls reading sections on aging management statues of these nuclear power plants.

2.1.7 Radiation Protection

Anyone not familiar with what is meant by satisfactory when the content of these regulatory oversight reports may not find the performance rating: satisfactory.

When you look in the dictionary – satisfactory generally means something that meets the minimum standards or requirements but may not exceed expectations.

The 2024 ROR was sent to a community member and that person expressed the same reaction to the word satisfactory as this writer noted. There may be time to review these performance rating descriptive words. The definition of satisfactory needs to be clearly explained to ensure the public knows what this rating word satisfactory means within the regulatory context for nuclear power plants.

Section 2.1.7 Radiation Protection

It is noted that in this section (page 34 last bullet) that the CNSC issued a request to all Canadian nuclear power plants to evaluate potential unaccounted doses neutron source characterization and mitigation measures REF CMD - M35.It is important that the Commissioners at the public meeting in March be presented with the results of this request for the public record.

Hopefully, it is only potential unaccounted doses were not actual doses. This needs to be clarified which one is it potential or actual.

Section 2.1.9 Environmental Protection

It is always unsettling to read there were action level exceedances for tritium in January 2024. With all the maintenance and refurbishment work ongoing, these kind of releases of radiological nuclear substances, such as exceedances for environmental tritium are worrisome. How many other exceedances occurred in all of the nuclear power plants?

Section 2.3 Pickering Nuclear Generating Station

Section 2.3.7

It is noted that in June 2024, CNSC staff issued a request pursuant to subsection 12 (2) of the General Safety Control Regulations to all Canadian nuclear power plants to evaluate potential on unaccounted doses neutron source characterization and mitigation measures.

In reviewing this ROR documents, it is noted non-compliant findings mostly of negligible safety significance for various reasons. For this reviewer, it is the cumulative impact of these non compliances that is a concern with such a high number of reactors in Ontario located in areas of high populations.

On an individual plant basis, these non compliances may be of negative safety significance, but taken all together in all the nuclear power plants over the yearly period , they do add up. In my view, this could I have the potential of undermining or weakening radiation protection for the public exposed. If this writer has come to this wrong conclusion, clarification is requested at the upcoming public meeting.

For the millions of people who live in the regional area of the Pickering site, it is noted in Section 2.3.9 Environmental Protection that dose to the public of 1.4 uSv/yr from the Pickering site, remained below the regulatory limits of 1 mSv/year. In this case for the general public, it would be useful to use the same units for instance if refers to mircrosieverts – we should use that unit all throughout.

It is noted that the standard is based on exposure over a yearly average. It appears that this writer, due to upset condition or a moderate or serious emission event that potentially could last a few hours, the radiation dose could impact these exposed the population near the Pickering site, which is 34 km from Markham Ontario, where there is a highly dense population base.

More worrisome, still there the Pickering Soccer Centre located at about 2 km from this site. There are outdoors recreational areas close to the Pickering nuclear plant. Same kind of exposure concern could be applied to the Point Lepreau Nuclear Generating Station that is located at 40

km from the city of Saint John New Brunswick. The question is whether this safe standard based on exposure over a year period takes into consideration to potential or actual periodic upset non-compliance event exposure even if only for an hour or two or longer.?

This writer didn't see much of this in the current ROR that addresses the shorter but higher radiation emission events. This writer would have like to have such radiation exposures addressed.

Section 2.3.12 Security

It is noted on March 7, 2024, that OPG conducted a force-on-force security exercise at the Pickering Nuclear Generating Station and Pickering waste management facility to meet subsection 32 (2) of the Nuclear Security Regulations. As of the end of 2024, CNSC is reviewing OPG reports of the result of the Security force-on-force exercises. By the time this report was signed, in September 25, 2025, nine months have transpired after the report was received even though the exercise took place on March 7, 2024.

By that time of the public meeting takes place in March of 2026, it would have been two years since this important exercise actually took place.

Such an importance security exercise decision outcomes needed to be expediated in a more timely manner. There's no indication that the Commissioners themselves (in camera) would know the results of this critically important exercise in a timely manner.

The public should at least learn that (a) decision on the security report has been rendered by the CNSC staff (b) the licensee successfully met section 36(2) of the Nuclear Security Regulations.

At the very least, the ROR should have indicated the Commission has met in camera to review the report on this exercise that occurred in March 2024.

The public should be advised that the security exercise met regulatory requirements or it didn't meet it, if so, for some reasons, standards were not met then and advise on what steps were taken to ensure compliance.

Currently the outcome of this security related exercise is unknown, even after nearly 2 years of the exercise being held. At the March 2026 public meeting, there should be some kind of an update on the status of this exercise.

Section 2.5 Bruce Nuclear Generating Station A & B

Section 2.5.6 Fitness for Service

This community member was reassured with the first few lines of the bottom paragraph which reads “in 2024, CNSC staff determined that Bruce Power’s Fitness for Service at BNGS A & B continued to meet applicable regulatory requirements”.

The next part of this paragraph makes this reviewer as it reads “ with the exception of its application to regions of potentially elevated hydrogen equivalent, concentration near the inlet rolled joints of pressure tubes in extended operation”.

This writer was surprised to read about the hydrogen uptake near the roll joints of the pressure tube at Bruce Power. Given this evaluation was done in 2022, it concluded continued operation was approved for a period of three years. The question is – how closed are we to the margin of the pressure tube now? Is CNSC providing oversight in this potential safety issue.

When it comes to the operation of a nuclear plant, this writer is concerned a risk informed decision-making evaluation was undertaken into 2022. This reviewer is not a big fan of a risk inform making evaluation with a nuclear power generation process. If that concluded, that continued operation of affected pressure tube is acceptable for a period of at least three years.

This community member is not comfortable with the decision process based on the risk analysis or the resultant outcome to continue operating for three more years.

Structural Integrity

The following statement “in 2024 Bruce Power continued work to confirm the fitness for service of the field welds in unit one and two feeders”.

Keep in mind, it was in 2024 by the time of the public meeting, it could be nearly 2 years for this work to confirm the fitness for service of the field welds in Units 1 and 2 feeders. Nearly 2 years is a long time for work to confirm fitness for service of those field welds. Too long as far as this writer is concerned. This confirmation work should have been completed by now.

CNSC should not allow such a long period to go by to confirm fitness for service of those field welds. During this time period, these wells could have failed considering this is not a new nuclear power plant. CNSC needs to ensure such confirmation work is completed by the licensee on a more expedited time frame.

Despite CNSC staff continuing to monitor Bruce Power progress and remediation of deficiencies of weld inspection data, along with receiving feeder inspection reports, etc. it is a licensees' responsibility to do the work to confirm the fitness for service of these field welds in Unit 1 & 2 feeders in a timely manner.

Aging Management

The example of operating this nuclear power plant with Unit 7 pressure tubes with flaws in the inlet region of interest, is noted in this section on page 85. This was accepted by staff on risk-informed considerations. As for this community members concern taking risk analysis approach is not acceptable, considering older nuclear power plants with aging pipes and welds.

This writer is not comfortable with this risk informed consideration as applied to structure integrity and ageing management describe in Section 2.5.6 on page 85.

Environmental Protection

Top of page 88, as one would expect to read the following statement: "Dose to the public from the Bruce sites (1.1 uSv/year) remained below the regular limits of 1000 uSv/year".

Release of radiological nuclear substance were well below the derived early release limits (DRL) for BNGS A & B in 2024".

Now the questions this writer is as follows:

1. What are by names these radiological nuclear substances?

2. Is the regulatory limit of 1 mSv/year (1000 uSv/h) health protective?

3. Can it be categorically stated today that even with this regulatory limit, incidences of cancer rates around this nuclear power plant are not because of this nuclear plant.

This writer has reviewed the ecological 2013 study titled " Radiation in Incidence of Cancer Around Ontario Nuclear Power Plants from 1990 to 2008 https://www.cnsc-ccsn.gc.ca/eng/resources/health/health-studies/radicon-study/

This study was published in the Journal of Environmental Protection - 13 years ago. Date modified to 2017 -09-08, eight years ago. This study period was from 1990 to 2008.

This writer would like to see this data plan from 2008 to 2025 another 17 years of study data to update the study to inform the findings in those 17 years. There have been many thousands of people who have had cancer around these Ontario nuclear power plants.

In conclusion, it's time for another updated based study on more radiation, exposures, and more people who came down with cancer.

This recommendation is made in light of all these recent studies such as the ones I referenced above, especially that study from the Harvard Researchers.
https://pubmed.ncbi.nlm.nih.gov/41408632/

Section 2.6 Western Waste Management Facility

Section 2.6.3

Regarding the last paragraph of page 95 of this section: This last paragraph caught this writer's attention at a total volume of radioactive waste was received at the radioactive waste management storage facility in 2024 was 6.087 m^3. During 2024, the incinerator operated for 171 days on solids and 65.5 days on liquids.

From this paragraph, it raises the question about burning such radioactive waste in the incinerator.There is inadequate information in this section that raises issues of such resulting in emissions from burning radioactive waste in an incinerator as implied in Section 2.6.3 Operating Performance.

There needed to be more explanation on what radioactive waste ends up in the incinerator that operated for 171 days on solids and 65.5 days on liquids.
Anytime one reads the word, “radioactive waste received”, and the incinerator operated in the same paragraph, one’s attention and interest is heightened where further information and explanation is required. This last paragraph does not provide such needed explanation.

Section 2.7 Point Lepreau Nuclear Generating Station

PLNGS underwent the first refurbishment of a CANDU reactor in 2008. It was well recognized that there were delays, challenges and cost overruns at the time. There was a deep learning curve as no other CANDU reactor had been refurbished. The ROR report identifies and provides current updates and future plans for many refurbishments either completed or in progress. It is noted, these other refurbishments are proceeding without undue delays or within their budgets. It is this writer’s view, having followed PLNGS over the years. It’s no consequence that these other Canadian nuclear power plants are being done without the level of challenges faced by that first refurbishment at PLNGS. This is because the nuclear industry was able to learn from the Point Lepreau Nuclear Generating Station refurbishment. Lessons were learned, shared and have been applied to these other refurbishments. The PLNGS management and staff should be commended for their efforts in safely and successfully completing that first nuclear refurbishment. For many years after that refurbishment this nuclear power plant worked successfully at 80% years that refurbishment encounters delays and cost over runs, but it was completed safely.

These current shutdown in 2025 was related to the non-nuclear side of the generating station in fact related to the turbine’s generator. It is important to know that both the licensee and the CNSC made sure despite the extra time and expenses, this nuclear plant refurbishment was carried out safely. This is what is important here not the costs of the shutdown itself.

Another two points, prior to reviewing Section 2.7 on the Point Lepreau Nuclear Generating Station, a part needs to be made on the human performance management.

There is currently a comprehensive review of NB Power ongoing at this time. Various options are being considered for this licensee's future. Those kinds of reviews can have an unsettling impact on employees, including the 900 employees working at the Point Lepreau Nuclear Generating Station.
The uncertainty can be stressful and worrisome. Potentially it could impact the human performance side of the operation.

This kind of stress can create what is referred to as psycho-social health effects. This kind of health effects was identified and explained during the Public Health Risk Assessment for the Irving Oil Refinery Expansion Project in 1999. In that case, it was the surrounding community who was experiencing this psycho-social health effects from having this massive industrial complex built in the area. It is recommended that CNSC take steps to monitor whether there are signs of this psycho-social health effects occurring at the Point Lepreau Nuclear Generating Station. If there were indications, of more stress related sick days, for example, then mitigation step needs to be implemented. This writer observed this kind of employee's impact when the province of New Brunswick underwent a fundamental change on how child services were delivered from an institutional model to a community-based model. Employees delivering these services, we stressed moving from an institutional model to a community-based one.

This impacts the employees in fact; it turned out their world upside down. Any employment change at the PLNGS, such as potentially working for a new employer owner if sold, can create stress and distraction in an already stressful work environment, such as being a nuclear facility.

The other issue of concern has been the impact on human performance over the fact that the Station has been offline for about nine months in 2025. Currently it has started and is providing electricity as of December 14, 2025. My concern here is whether the employees have been affected by not carrying out their well established active operational duties for a long period of time.

Section 2.7.2 Human Performance Management

This reviewer had been of the view over the years that the human performance management area is one of the potentially vulnerable aspects within the safety control areas simply because even the most advanced system is no match for the human conditions with its human frailty dimensions and human condition.

It is interesting to note on Page 107 of the two non-compliance ones being of low safety significance while the other of more concern described on non-compliance of medium safety significance.

The medium designation is of more concern to this reviewer. The fact that this medium safety significance was related to personal training and fitness for duty is more noteworthy.

Further, this non-compliant finding of median safety significance was in the area of Fatigue Management further illustrates how the human performance aspect of operating a nuclear power plant when failing to maintaining the regulatory standard could result in a serious operating decision from a key staff personnel, being overtired and fatigued.

Quite frankly, it was disappointing to read that this noncompliance with REGDOC 2.2.4 Section 4.2 and 4.3 were also identified during previous inspections.

CNSC staff note that the corrective actions were adequate at preventing the recurrence of non-compliant findings as they were found in multiple follow up inspections.

Further, as a result of these continued noncompliance identified and in accordance with the requirements of REGDOC 2.2.4, CNSC self issued a warning letter to NB Power on January 7, 2025.

Update March 20, 2025

CNSC issued an administrative monetary penalty of $24,760 to NB Power. NB Power also provided information to this writer related to this administrative penalty.

These regulatory sanctions demonstrate to this community member that the CNSC is doing its job to ensure the regulatory standards are being applied to ensure the safety standards are complied with in all of the safety control areas.

It also demonstrates there are no favourites or free passes when it comes down to CNSC monitoring and enforcing the safety regulatory rules. Public confidence in the CNSC is important.

Probabilistic Safety Assessment

This section noted that NB Power did not have an online risk monitor as required by their governance. In discussion with the licensee, this writer learned that the Station has several risk management processes. This finding is specific to an on-line risk monitor(software) utilized as part of the PSA which is referred within their internal government. NB Power has been undertaking a project to develop an on-line risk monitor and is incorporating industry best practices and quality assurance standards as part of the project initiative. The on-line risk monitor is a recommendation. NB Power meets all regulatory requirements with regards to its monitoring.

NB Power did take corrective actions to revise the procedures, noting that an online risk monitor is not currently part of their risk management process and is not a regulatory requirement. Despite CNSC staff being satisfied with their corrective actions, this reviewer concurs with CNSC staff recommending that NB Power consider industry, best practice and relevant quality assurance standards for the development, implementation of the risk monitor.

Perhaps it is time for CNSC to include their recommendation into a regulatory requirement.

2.7.7 Radiation Protection

When it comes to radiation protection, one would not want to read about noncompliant finding even if it is a flow safety significance.

It is one thing to be a noncompliance over matters pertaining to administrative paperwork standards, but quite another view when it pertains to radiation protection Whether it be for the workers or the public.

In this writer's view, there should be 100% compliance when it pertains to radiation protection. Although this listed noncompliance appears to be of low safety significance and minor, from a community members perspective, they all have safety implication otherwise CNSC would have set up regulatory requirements which are legally binding for this and other nuclear power plants.

From this writer's perspective, living 40 km from a 710 MW nuclear power plant, there is not a lot of tolerance for noncompliance on their radiation protection. Even if it is described as a low safety significance. This conclusion is based on the CNSC safety regulations found in multiple regulatory documents, which are legally bindings on these licenses. Those comments apply not only for PLNGS but to all Canadian nuclear plants.

The ROR on Page 118 for PLNGS states: "actions were taken to control radiological hazards to protect workers". The section makes no reference as to what were or are these actions, somewhere in these sections a reference link would be helpful as to what actions are being taken. The licensee provided information on the event and also maintain a list of their events on the website. https://www.nbpower.com/en/about-us/regulatory/nuclear/nuclear-events/

Section 2.7.8 Conventional Health and Safety

Reference: Working with Asbestos

More information is needed in respect to asbestos at the point of pro nuclear generating station.

How much of it is in the facility, is it found on pipe wraps?

Is there a plan to remove and replace current applications?

It is assumed there is a removal and or replacement plan for asbestos. If such plans exist, there's no information provided in this ROR document. A digital link to asbestos management is requested.

Section 2.7.4 Environmental Protection

Doses to the public from the Point Lepreau site (0.077 uSv/year) remains well below the regulatory limits of 1 mSv/year.

Over a year average yes, but what about those unexpected upset condition emission releases when there is a shorter-term concentrated release of radioactive substance releases. Due to unforeseen circumstances, such radioactive doses could occur, impacting those residents in the vicinity of this nuclear power plant.

This writer was happy to see that PLNGS has information published on their website with regards to radiation emission. Note that there is an elementary school near this nuclear plant and one of these unexpected nuclear emissions could impact young children playing outside in the school yard approximately 4 km from PLNGS.

As noted in the beginning of my submission, this writer would recommend a health study to see if there is a linked or risk cancer in the vicinity of the PLNGS similar to the study sided above completed in Massachusetts USA.

Many large industrial sites in East Saint John New Brunswick over the years have had upset condition where large volume of contaminants such as particulate matters (PM 2.5 and PM 10). (H2s) (TRS). I've been released. Could such unexpected radioactive releases occur at PLNGS?

PLNGS has a table on their website that refers to total emissions.

https://www.nbpower.com/media/1493774/plgs-totalemissions-april_2025.pdf

https://www.nbpower.com/en/safety/nuclear-safety/radiation-safety/#:~:text=A%20by%2Dproduct%20of%20our,as%20medical%20and%20dental%20procedures.

If such releases have occurred, this reviewer would like to know. The CNSC should have been informed, and if so, a record of such unexpected emission should be made available in the ROR under either Environmental Protection or Radiation Protection Section for all nuclear plants in Canada.

2.7.10 Emergency Management and Fire Protection and Performance Rating - Satisfactory

As noted above, this rating term describing performance to be "satisfactory", does little to describe the outstanding and high-level performance for PLNGS nuclear emergency, preparedness and response action. These rating words needs to be again reviewed by CNSC.

This word as defined in several English language dictionaries means: fulfilling expectations or needs; acceptable, though not outstanding or perfect.

The CNSC's used of the word satisfactory to describe performance rating does little to inspire public confidence.

A case in point in section 2.7.10, Emergency Management and Fire Protection.
NB Power conducted a full scale, nuclear emergency, preparedness, and response exercise from October 29-30, 2024. It was generally understood by the community and various partners that this exercise was highly successful. The CNSC rating of satisfactory is inconsistent with community prospects and understanding.

2.7.12 Security

There is only one potential area of concern. This writer would like to raise. There is no expectation that a response would be available to the public considering it is a security matter.

Anyone who lives in the area of PLNGS and has visited the site, realizes that there is a long main road leading to the site in the event of a transport truck blockade, this road could be made impossible to decide for both the staff and emergency responders. Restriction for staff to leave or for new shifts to access could place the Station at risk.

As part of this writer public engagement and communication with the licensee, it is his understanding that there is one main two-lane road that leads directly to Point Lepreau Nuclear Generating Station (Route 790). In the event of an emergency or disruption, such as a road blockade by a truck convoy or other obstruction, there is a secondary road available to access site.

As part of the Station's security and safety planning, it's important that the secondary road is not only designated as an alternate route but also assessed to ensure it can sustain the necessary traffic volume in case of a blockage on the main road. If this secondary road is not adequately suitable, steps must be taken to construct and/or reinforce it to support the flow of vehicles, particularly in high-priority situations.

In addition to infrastructure, comprehensive contingency plans should be in place to monitor traffic on both roads. Advanced notification systems, such as road monitoring sensors or real-time updates, should be deployed to provide early warnings of potential blockages. This would allow security and emergency response teams to take immediate action to mitigate any risks and ensure the safety and timely evacuation, if necessary.

Regular drills and coordination between local authorities and security planners would ensure that, in the event of a road obstruction, a clear and well-executed plan is in place to safely divert traffic and maintain access to the site.

That defensive action could be the establishment and activation of steel barrier set at the entrance of this main road to the plant. The steel barrier would be set up at the entrance of the road to the plant so as to prevent any such threatening truck convoy from gaining access on this roadway. No one ever expected a truck convoy to block streets in front of Parliament several years ago.

A nuclear power plant could be a target for such antisocial threat action. Such as scenario described by this writer is not with without possibility.

Cyber Security

Having attended past CNSC Zoom call information pre-regulatory sessions, on cyber security, this writer was not at all surprised when one of the CNSC official told the participants that the biggest threat to these nuclear power plants is the area of cyber security.

This writer noted from past CNSC session that I made written in reference to it so as to remind myself to raise this issue during future ROR reviews such as in section 2.7.12 cyber security.

One cannot wonder if artificial intelligence (AI) technologies will be part of the current cyber security apparatus now or in the future. If not, the CNSC in any future cyber security regulatory document review may need to provide guidance and regulatory control, if not already in place.

Under cyber security, it is noted that in 2024, CNSC staff continued to track NB Power’s action plan to address the new compliant finding from 2021, CNSC Type 1 Inspection of NB Power cyber security program regarding the implementation of CSA N290.7-14 (Cyber Security for nuclear power plants and small reactor facilities).

This time frame is three years, which from regulatory and oversight perspective is warranted. This question this reviewer has was the cyber security infrastructures and process out off or in non-compliance during this long three-year tracking by CNSC?

If so, a cyber security threat could have left this nuclear power plant vulnerable. Hopefully this was not the case, but this section on Page 123 does not provide any answers. There is no reporting on this question even in the commissioner camera session.

Section 2.8 Gentilly Facilities

2.8.2 Human Performance Management

In this section, it illustrates this writer's concern that non-compliance actions or lack thereof can potentially be problematic. An example in 2.8.2 in 2024, CNSC staff reviewed the annual report of record of exceed of limits for hours worked for the previous year and a negative trend was identified.

It appears that management overseeing this SCA area was less than attentive to allow a negative trend to occur. Thankfully, CNSC were able to identify this unacceptable trend in this case since it was a negative trend and not a few times situation, CNSC should have issued a warning letters and or an administrative fine issue just as PLNGS received, but for lesser reasons.

2.8.3 Operating Performance

Someone was sleeping at the wheel when section 2.8.3 states: (Page 127), Hydro Quebec reported to CNSC staff that one of the two annual visits scheduled by the local fire department (under the Operating Performance SCA) was missed.

Although, it may not appear to be all that important, it falls under Safety Control Area under the legally binding requirements. These regulatory documents are not voluntary guidelines, but legally binding rules under the Federal legislation written to keep Canadians safe.

Those responsible for all noncompliance should be held responsible with notations attach to their personal file. Just because CNSC designate these as low safety significant in the world of operating as a nuclear power plant – they are still significant when it comes to operating a nuclear facility.

It may be time for CNSC to start cracking down on this low safety significance noncompliance. In many hospitals, laboratory medicine units, medical laboratory technologists who make an error, it will generate an incident report attached to the health care professional. Same approach is recommended for SCA employees will fail to ensure the regulatory document compliance actions are followed.

This practice may already exist, if so, it should be explained in the ROR under human performance management policy.

2.8 Gentilly-2 Facilities

Section 2.8.7 Radiation Protection

This section on radiation protection is of special area of interest for this community member. It is reported that a general inspection was completed in 2024. Two of the three notices of noncompliance were in the radiation protection area.

One finding of concern to this writer, described as “of minor significance involved a contamination metre with a calibration date of March 2024”. More than one year since the last calibration. CNSC may describe not calibrating a contamination metre for one year as minor, but for these employees who depended on an accurate reading of this contamination metre to keep them safe, minor safety significance may not have been acceptable since that person could have received an unsafe exposure off radiation in their workplace. These types of events need to have been reported to the occupational and health them at this facility and could be classified as a near miss event.

Section 3 Consultation Engagement and Public Disclosure

In reviewing all sections of Section 3, two words comes to mind, impressive and expected. From this writer’s perspective and experience reviewing regulatory documents, you can never have enough public consultation and engagement. This section illustrates the efforts CNSC and Licensees are making and the importance of building relationships and consulting with Indigenous peoples and public at large.

From this community member per perspective, Section 3, 3.1, 3.2 are critically, important and highly valued as essential for the CNSC as an agent of the government of Canada and as Canada‘s nuclear regulator and acknowledging the importance of building relationship and with Indigenous people of our country.

Section 3.1 reports that the CNSC works closely with Indigenous Nations and communities as part of its ongoing commitment to consultation, engagement and reconciliation will have rights and interests in relation to CNSC regulated facilities.

It was informative to read dissection on the various ongoing Indigenous engagement and practises as Section 3.1.

As a non-Indigenous community member, this review is in no position to determine if such engagement activities are adequate or meet this legally required expectations of Indigenous people whose land, are on and occupied by the Canadian nuclear generating sites it would’ve been helpful to have a section on whether Indigenous consultation and engagement has been effective and consistent with the guiding principles and legal requirements. A progress report would have been helpful.

Statements of commitments and listing engagement practises are one thing, but how effective idea according to the Indigenous people and impacted? This writer would welcome some kind of report card on those efforts. Perhaps some kind of a performance rating system could be considered like is found in the other sections.

Section 3.1.1 CNSC

Engagement efforts was a particular interest in so far as learning what kind of engagement activities took place in 2024 for the Canadian nuclear power plants.

Section 3.1.1.1 Pickering and Darlington Sites

CNSC engagement efforts presented is quite extensive and detailed and specifically focussed on many engagement activities. This is a contrast to what engagement activities looks like at Bruce Power sites (Section 3.11.2).

Dissection in paragraph is more of a general statement where CNSC staff engage but not as specific as what is described in the Pickering and Darlington sites.

Section 3.1.1.3 Point Lepreau Nuclear Generating Station

It is clear from reading section 3.1 (Indigenous Consultation and Engagement) that CNSC staff continue to strengthen their efforts in regular engagement and communications with the focus to formalize and continue to strengthen those relationship with Indigenous Nations and communities in New Brunswick.

In this section, related to the PLNGS the efforts in building relationship is demonstrated by information shared at information sessions, to discuss topic of interest, including the ongoing operation of Point Lepreau Nuclear Generating Station, CNSC, EMP, gathering and inclusion of Indigenous knowledge, funding opportunities and CNSC's role in regulating potential small modular reactor project in New Brunswick.

Hopefully, there will be a formalized term of reference for long-term engagement for MTI, Kopit Lodge, WNNB and PRGI. Glad to see in 2024 that the CNSC staff attended in person community if you give me an engagement session as well as multiple POWOW's in Mi'gmaq communities.

Respect and trust building are essential factors of meaningful public consultation. Encouraging to read that the CNSC are committed to ongoing engagement and collaboration with interested groups, including Indigenous people, communities, and representative organizations in New Brunswick.

Section 3.1.3

This writer was pleased to see the establishment of the issue and concerns tracking table for each Indigenous Nations or communities who intervened in CNSC regulatory processes, including RORs. In this writer's past review of the RORs, such a record that captures requests, concerns and comments were needed. This is the most rate CNSC's proactive responsiveness to various public interventions

Section 3.1.5. Licensee and Indigenous Engagement Activities

The last paragraph in Section 3.1.5 needs to be single out and recognize as positive. Specifically, in previous ROR interventions, Indigenous Nations and communities raised concerns that their views on licenses engagement were not reflected in the ROR.

CNSC in response to this concern, sought feedback from interested parties with regards to their perspective on licenses engagement with them in 2024. This shows CNSC, listening and paying attention to those interventions. This writer will focus his comments on Section 3.1.5.3.

NB Power - Section 3.2 Public Consultation and Engagement

Over the past 15 years, this reviewer has had the opportunity to engage with and provide input on various initiatives and interventions involving NB Power, including those related to the Point Lepreau Nuclear Generating Station (PLNGS). The primary point of contact throughout this period has been the Manager of Public Affairs and Nuclear Regulatory Protocol. Through many years of public engagement, this official has carried out her responsibilities in an exemplary manner.

This official consistently been attentive and responsive to this reviewer's inquiries and concerns by organizing numerous information sessions with PLNGS subject-matter experts, convening focused meetings on topics of interest, and providing supporting documentation to complement and enhance meeting discussions. In addition, through her role as co-chair of the PLNGS Community Relations Liaison Committee—which includes key stakeholders from surrounding communities—and through the organization of public open houses, NB Power has demonstrated an ongoing commitment to building relationships and providing relevant, timely information to community members.

I would like to take this opportunity to formally acknowledge Kathleen Duguay and her team who has been instrumental in ensuring that relationship-building, transparency, and trust with surrounding communities remain a strong focus for the licensee. It is therefore no surprise that Kathleen was the recipient of the CNA-CNS Communication and Education National Award in recognition of her outstanding efforts in developing and maintaining meaningful relationships over the years.

Of particular interest and value was a section on the CNSC - Canadian Association of Nuclear Host Communities (CANHC) Relationship. This is a much needed and valued initiative that no doubt will be of much value to not only hosts communities, but perspective always communities, especially as new nuclear projects moving forward.

Section 4 Other Matters of Regulatory Interest

Section 4.3 - Forum Between CNSC and Canadian Environmental Non-Governmental Organizations (ENGOs) is most welcomed to see included.

This writer is really pleased to see the establishment of this form to exchange information and ideas, as well as consider substantive and procedure concerns relating to the Canadian nuclear regulator.

Additionally, very pleased to read the forum promoting constructive dialogue, discussion, and debate in an open and transparent setting. This reviewer is very supportive that this form is in place. It is noted that of the six member organizations listed, none are from New Brunswick which is a province that hosts a nuclear facility.

his writer would like to recommend that an ENGO organization be identified to participate. writer would also be interested to be part of this group, as I have had interest in the nuclear energy file for years. This writer is also a co founder of the Citizen Coalition for Clean Air – a registered member group of the New Brunswick Environmental Network.

As additional jurisdictions and provinces are in the midst of developing nuclear energy project, it would be suggested that CNSC also reached to those ENGO communities in Saskatchewan in Alberta and identify those member groups who may wish to participate as a member of this forum organization set up by the CNSC. Finally, it is good to see ENGO Forum Meeting Agenda available on the CNSC website.

There is a final point that this writer would be open to be included within that ENGO Forum - Section 4 - Other Matters of Regulatory Interest

It is recognized that there has been much public interest in the nuclear industry, especially as it pertains to its contribution to energy generation as well as safety.

It can be easily stated that this interest is often related either on a negative perspective. More and more to the negative anti-nuclear perspective is presenting itself within their various public domains.

This can only be expected to increase as more nuclear projects move forward, especially in those provinces now in the development of nuclear energy projects both on the traditional and Small Nuclear Reactor sphere.

The public are being presented with various research studies, one of which was referenced in the first part of my submission. There are public presentations in releases, such as on Zoom calls, etc., that call into question the credibility of the Canadian Nuclear Safety Commission responsible for the safe operation of these nuclear power plants in Canada.

The ROR document certainly provides the public with high-quality fact-based information that counters this credibility claim often provided to the public to those oppose to peaceful use of nuclear energy generation. This writer based on years of reviewing these ROR reports and participating in various interventions and public meetings, as for confidence in the CNSC capacity and findings that these nuclear power plants are operated safely.

This writer has to admit that reading these health impact related studies on the impact of radiation in the vicinity of these plants show issues of doubt are beginning to appear in my otherwise conclusion that those nuclear power plants are safe and no too little risk of cancers in population in the vicinity of these power plants. With this in mind, it is recommended that CNSC either alone or with licensees set up a communication strategy to review these highly publicized studies that call into questions that radiation from these nuclear power plants are the cause of cancer in the surrounding areas of these sites. The CNSC needs to improve its communications exploring these Canadian Nuclear Power Plants are safety operated.

This writer would like to see the federal regulator set up review panel of experts to review these more common research studies. The purpose is to determine how much faith in belief should the public have in these anti-nuclear claims.

This purpose is to ensure accuracy, science and evidence base approach in these studies. Such as review panel is not a discredit to the sources, but to ensure correct in accurate information is used, misinformation or mission needs to be pointed out.

The public needs the CNSC to provide accurate true information and correct false claims that may be found in various public studies often sited by the anti-nuclear groups. To have incorrect information circulating in a public only cause unwarranted anxiety and misinformation.