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Written submission from Gordon W. Dalzell

Mémoire de Gordon W. Dalzell

In the Matter of the

À l'égard de la

New Brunswick Power Corporation, Point Lepreau Nuclear Generating Station

Société d'Énergie du Nouveau-Brunswick, centrale nucléaire de Point Lepreau

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Application for the renewal of NB Power's licence for the Point Lepreau Nuclear Generating Station

Demande de renouvellement du permis d'Énergie NB pour la centrale nucléaire de Point Lepreau

Commission Public Hearing
Part 2

Audience publique de la Commission
Partie 2

May 11 and 12, 2022

11 et 12 mai 2022

Canada

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Saint John, NB

March 21, 2022

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SUBJECT: 2022-H-02 - New Brunswick Power Corporation
Point Lepreau Nuclear Generating Station Licence Renewal

Dear Sir/Madam

Please consider this submission as my written intervention for the upcoming public hearing on the renewal of the NB Power operating license for the Point Lepreau Nuclear Generating Station.

As part of my public review process, this intervenor received ample notice about the license renewal process both in the mail, CNSC online information notice as well as various communications and material to support my intervention from NB Power. As a result of this engagement, this writer followed up with the licensee to set up meeting and discussion about certain topic of interest, issues and concerns to include aging management and spent fuel bay lining and reactor building concrete.

I participated to webinars hosted by the CNSC and NB Power. I also attended the public information sessions that NB Power hosted which provide me with an opportunity to discuss further with subject matter experts. This writer spent months reading and reviewing material that was publicly available as well as additional documents provided by the licensee.

As part of this public review process, various intervenors including this writer will identify issues of concern in a critique style format of the CMD Document, best practices, questions related to safety, as well as questions related to the CNSC CMD-PLNGS Licence Renewal. Further to this process, it is this writer's understanding that CNSC staff will identify and summarize those issues and concerns along with responses to them. This writer is also requesting that the response prepared by CNSC be included as part of the Part II Hearing in May.

The response document needs to be included in the public record of this licensing renewal proceeding. Such a document was prepared and made available as a reference to the Commissioners during the 2021 ROR Public Hearing. These response document for all intervenors would be very helpful and enhance the public review process as well as providing facts about the various topics.

My comments are presented in three sections:

SECTION A Comments on NB Power – PLNGS CMD

SECTION B Comments on the CNSC staff CMD

SECTION C Comments on the draft Licence Condition Handbook

SECTION D Conclusion and Recommendation

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

Respectfully submitted,

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

Background information of commentator

This writer is making this submission as a member of the public and interested party, having followed the nuclear industry and its associated regulatory oversight over many years.

I have followed both the regulatory activities for the nuclear power generating stations in the industry with a special interest in the Point Lepreau Nuclear Generating Station (PLNGS). More recently, over the last 2 to 3 years, this writer has taken a more current interest in the research and development for small modular reactors taking place in Saint John New Brunswick. Specifically, this writer participated at some past CNSC public meetings and hearings, as a former intervener for the PLNGS license renewal as well as in the EIA for PLNGS Solid Radioactive Waste Management Facility (SRWMF) expansion in 2005.

Additionally, over the last few years, I have made to past written submissions on the regulatory oversight report as well this writer plans to participate in the current licence renewal for the Point Lepreau Nuclear Generating Station. The purpose of those interventions is to ensure that the safety parameters covered in the ROR have been adequately addressed.

The purpose of this submission and intention was to review New Brunswick Power Corporation ‘s (NB Power) licence renewal application and related documentations including NB Power and CNSC Commission member document to include commentary on issue and area of concern in relations to the licence renewal.

This written submission to the CNSC will include summarization of my comments from this review of the proposed licence renewal application.

Commentary on NB Power Written Submission for the renewal of the Point Lepreau Nuclear Generating Station (PLNGS) Power Reactor Operating Licence.

SECTION A Comments on NB Power – PLNGS CMD

CMD 22-H2.1 Part 1 Hearing – January 26, 2022

The first paragraph in this executive summary states that NB Power is seeking a renewal of the PLNGS operating licence for a term of 25 years until 2047. This writer is opposed to such a long licensing period for the following reasons:

1. The standard licencing period in Canada has been for a 5 to 12-year period. That has been the precedence. The current licence renewal was for a shorter duration of 5 years. To go from a 5-year licensing period to a 25-year period is noteworthy that requires very compelling and convincing reasons to justify such a long period. Just because these 25-year licences are in place in other countries around the world and is an industry trend, does not mean that nuclear regulator should follow such a lengthy licencing period. This writer's concern is focussed on the lack of rigorous public review such as currently in process during this regulatory CNSC public review. NB Power counters this argument with the claim that annual review of the Regulatory Oversight Report process allows the public to be engaged and intervene in a public hearing. These ROR review processes are not what I would call as robust and thorough compared to a licence renewal process. These regulatory oversight reviews generate very limited and engaged public with only a handful of intervenors – one of which is this writer. Not all intervenors are permitted to make oral presentations. The ROR process covers all the Nuclear Power Plants in Canada in its report. For PLNGS, approximately 36 pages cover this licensee. By contrast, this current licencing renewal provides much more comprehensive reports and documentation for the public to learn what is going on in the operational safety parameters for PLNGS. In reviewing NB Power's written submission, CMD 22-H.1, this writer was struck by the fact that the listed improvement plans, and significant activities are so critically important - many will review a thorough public review process that only a licensing renewal public hearing process scan provide as we see being played out in this current licensing renewal process.

The improvement plans listed in 16.7 raise the question whether they should have been identified in advance of this application specifically in the previous licensing renewal process or at least identified in the annual Regulatory Oversight Reports.

Another reason for a shorter licensing period from the requested, twenty-five years has to do with the development of Small Modular Reactors that is reference in the NB Power Submission even though it has nothing to do with this nuclear power plants licencing renewal. The fact is the current licensee has been and will continue to be heavily engaged with these SMR technologies with its nuclear power plant playing a key role in their development not withstanding the fact such SMRs being proposed will required separate licences.

With so much public interest in the research and development of SMRs here in New Brunswick and with so much now to follow a 25-year licencing renewal will be much too long a period that could leave the public out of the expected integration between these SMRs and the operation radioactive nuclear waste management aspects of PLNGS. It needs to be noted that the review documents for this licence renewal does make reference to SMRs.

A 10-year licence renewal as in the past practice is more consistent with public expectations and need to know safety requirements with both these new nuclear power generating technologies.

In respect to Section 16.7 improvement plans and significant future activities here are some additional issues of concern that would preclude any 25-year licensing renewal time period.

There are significant future potential upgrades being evaluated such as heat transport pump motor replacement, high pressure turbine roto replacement and unit transformer replacement. The one of my concerns has to do with radioactive water that will be removed and stored in a purposed built safe storage budling to be located in the vicinity of the Solid Radioactive Waste Management Facility. This higher curie water will be drummed and transported to this facility. This kind of upgrade is just another of many to justify why a 10-year licence should be granted by CNSC considering there will be intense public interest that could be satisfied with only a licencing public review such as currently in process.

As part of this review o f New Brunswick Power Corporation's licence renewal application, this writer has carefully reviewed (a) the application document CMD-H2.1 with the focus on identifying issues of concern, unanswered questions, potential omissions, and potential discrepancies. This type of review will identify what the applicant presents that could be inconsistent with the public's expectations in respect to the many safety criteria covered in the applications.

This same approach will be followed in the CNSC Commission Member documents referred to as CMD 22-H2. This writer read both these documents very carefully. This part of my submission will now systematically start with NB Power's Licencing Renewal Application CMD 22-**CMD 22-H2.1**

1.0 Introduction

Anyone looking at the picture of this nuclear power plant on the front page of the applicant's submission clearly can see it is located adjacent to a body of water namely the Bay of Fundy for those of us who are familiar with this facility. Despite the photograph included in Section 1.0., there is not one mention of the fact that this nuclear power plant and nuclear waste storage units are located adjacent to the Bay of Fundy with the highest tides in the world that are subject to potential storm surges sea level rise anticipated during the life of the requested 25-year licencing period. Although climate change impacts intense weather events are identified later in the application. The fact that it is not mentioned in the opening introduction indicates to this writer that such location impact potential may not be all that significant which is inconsistent with the public's worry and concern. Important highlights of PLNGS are included in the important introduction but unfortunately one of the key points from a public interest perspective was omitted in the description of the site.

2.1 Management System

Reference to training – this training has been a catalyst for a noticeable improvement in behaviors, attitudes, and engagement throughout the organization. How is this statement substantiated, what scientific empirical evidence is provided in areas of "improvement in behaviors and attitudes"? Yes, engagement can be documented up by counting the number of engagements and survey regarding the quality but when it comes to stating " a noticeable" improvement in behaviors, attitudes, the applicant did not demonstrate ample substantiation of that statement or evidence-based research as a foundation to such a statement. If this writer has failed to locate such reference to back up this claim then the

commissioners could request such during the Public Hearing process. The other side of the above cited statement is what kinds of behaviours and attitudes were identified that needed to be addressed in this Process Document Owner Training in this first place. There is no information provided which is important as certain behaviours attitudes could potentially be interest to the CNSC as regulator as well as of public interest.

In this section, under the Management System Improvement Project, the process model was updated to reflect the new Point Lepreau branding what does that mean? The CNSC staff need to drill down into what is the new Point Lepreau branding and what are the operational impacts to the day-to-day operation and public communication changes.

RE: Tracking Regulatory Requirements: The Management System identifies the Licence Conditions Handbook as important for Senior Management to have a mechanism that allows management to track where in the Management System it meets regulatory standards and requirements. Good to see a plan is in place to determine the process to track and update regulatory requirements in the Management System, so it is visible.

The question has to be asked why wasn't such steps taken during the last five years of the current licencing period?

2.2 Organization

Ensure the succession planning process meets organizational requirements. This is one of the most important issues in respect to the future safety management of this nuclear power plant. The applicant notes that throughout the next licencing period it is working on the continuous improvement of succession planning to Manager and Supervisor levels with an aging workforce early retirement, staff on leaves etc. This whole area of the operational knowledge and assurance of fully certified staff is one of the most important areas to ensure the safe operation of this nuclear power plan over the next licencing period.

In my view, much more information on this area of succession planning needs to be flushed out and presented to ensure public confidence that the required staff will be in place for the future. There needs to be more explanation on how NB Power – Human Resources will ensure that staffing levels remain adequate into the future with a focus on the recruitment of new and the retention of existing licenced staff.

This is essential to the safe operation of this nuclear power plant facing challenges of hiring new staff transfer of subject matter expertise, lack of long-term experienced employees leaving etc. The last paragraph of page 20 of 157 is reassuring to reach extensive hiring has occurred over the last several years to ensure continuity of knowledge and skills. Further areas that have unique demographic challenges or talent shortages are proactively addressed and are monitored at the Senior Management executive and Board level to ensure hiring and training requirements are met. This writer urges the CNSC as the regulator to keep on top of this area.

2.3 Performance Assessment, Improvement and Management Review

Nuclear Oversight Group

There is reference to internal independent oversight evaluations since 2016. The question this writer has is how independent is this Nuclear Oversight Group? There is no information on the name of this independent Nuclear Oversight Group. Who are they? Are they independent or are they associated with nuclear industry? How open and transparent is this group? I assume they produce various reports and oversight analysis. These reports as well as the other oversight groups that are referenced that provide external nuclear oversight such as the Nuclear Safety Review Board (NSRB); Corporate Nuclear Oversight Team (CNOT, may be perceived by the public as being too close to the nuclear industry or in fact members may be working for the nuclear industry. There is no reference to their finding, member's qualifications, and affiliations.

The term of reference for the NSRB is covered in Section 2.3 but there is not reference as to where their reports and findings can be available or referenced. These reports need to have been part of the licencing renewal. It is recommended that that these assessments, reports be referenced and made available for the CNSC Commissioners heading the licensing renewal. Further explanation is required.

This writer based on years of participating in past hearings including Regulatory Oversight Reports agrees with the applicant that the CNSC ensures compliances to the Nuclear Safety Control Act through many means as noted in Section 2.3. This writer further has full confidence in the CNSC staff as they carry out their regulatory responsibilities.

2.4 Operating Experience (OE)

Corrective Action Program

This section did not provide any reference such as an appendix reference to where the public could reference this program such as events, event precursors investigations, action implemented in a timely manner. Again, a reference number where such work was completed would have been useful.

In the application document, document that writer could not locate any such reference, in the section under 2.4, a summary of findings would have been helpful. May I suggest that Commissioners be given this information for their review and analysis. CNSC may have covered this in their submission as well.

Trending

This is important area of concern as it identifies degrading or potentially degrading Station conditions based on the analysis of previous events and Station data. As this short four sentence section notes - *These low-level issues can be viewed as precursors to more significant events.* In my view, this important area is not adequately covered. Questions such as what the identified trends are not covered. They may be covered but again, no reference to where such important information is located. All that is needed perhaps is a reference document.

2.6 Safety Culture

The writer has full confidence in the following: *Nuclear Safety is the primary focus of Station activities.*

There is reference to – *Identify areas for further improvement* – but fails to identify any of them. It would be helpful to know what these areas for further improvements are since it could be another 25

years before the next major comprehensive public hearing process. There could have been a list of the key areas for improvement included in this applicant's section. At lease a reference to where such information could be located. I would request the applicant provide such information if not possible then the CNSC staff provide it as a matter of public interest.

2.9 Management of Contractors

Although Management of Contractors may not be as involved as when PLNGS was in the past refurbishment period. This whole area still is one of concern as contractors are still involved in eh day to day operational activities of this nuclear power plant.

One area that has been a past and current concern to this reviewer centers on the Management, oversight of contractors including training and monitoring. In my view, this whole area of use of essential contractors working within this complex nuclear and highly regulated power plant have the potential to create safety issues simply because many of those contractors may not work in these nuclear facilities on a permanent full-time on-going basis. There could be some circumstances that they may not be fully aware of the potential safety issues that they unknowingly could create as they carry out their work assignments. PLNGS will be undertaking various work projects that will include the use of contractors. Despite best efforts from licensee to ensure proper training and supervision, there is always the potential that contractors working on future projects could be involved in incidents or accidents involving close exposure above safety levels.

This is in my view another important area of potential concern that Section 2.9 of this application does not adequately cover. Despite the fact that PLNGS provided oversight to supplemental personnel (contractors) to ensure they receive adequate orientation, training support and direction in order to carry out their work assignment s to ensure that they conform to the standards and expectations defined in the PLNGS Management System, things can and have gone wrong with the use of external contractors at nuclear power plants including PLNGS.

In reviewing reports of nuclear power plants including this one subject to this review, there have been contractor-based issues that have had to be addressed. There is always the potential for problems despite best efforts when you bring in outside contractors into this or the other nuclear power plants.

There are many examples of such problems incidents etc. in the past ROR reports that covers all the nuclear power plants in Canada.

Business Continuity

This section on COVID-19 pandemic impact and Management needed more information. No doubt such information is available somewhere but the question this writer has where it is. Again, providing an online reference link document and location of such information would have been helpful.

This section does acknowledge the pandemic outbreak has the potential to compromise NB Power Operations due to a large number of employees out sick or caring for sick family members, combined with possible disruptions to the movement of goods and services. This writer has been concerned about the se impacts form COVID-19 pandemic. It is noted that there is the NB Power Pandemic Response Plan but no reference in this NB Power applicant section as to where it is so members of the public could review it. Despite its management, this writer considers these impacts as one of the biggest potential safety threats, specifically due to the potential impacts where certified control operator employees of which are limited in numbers that have the potential to be unable to fulfill their duties.

At this upcoming public hearing, this writer is requesting from both NB Power and CNSC, an update on how effective was their COVID Pandemic Response plan as well the plan for the future as the pandemic is still ongoing. This pandemic is not over according to the WHO. Despite New Brunswick lifting of mandates and restrictions on March 20, 2022, this does not mean that can relax the licensee cannot relax their "COVID Pandemic Response Plan" – in fact, it needs to continue moving forward.

3.2 Personnel Training

Last paragraph on Page 36, it refers to and notes the following - *Align with the Industry practice of using a multiple-choice question test for the Science Fundamental certification exam for the 2021 class of trainees, resulting in improved evaluation of candidate knowledge and efficiency in exam preparation and grading.*

This writer suspects such as change has more to do with the later. Reference to *resulting in improved evaluation of candidate knowledge and efficiency in exam preparation and grading.*

Where is such substantiated - my concern is multiple-choice questions maybe easier or answers to the choice questions could be guessed resulting in higher marks not based on detailed knowledge. These multiple-choice tests need to be audited to determine if my perception is accurate. When I participated in the recent NB Power open house, I had the opportunity to ask questions about the effectiveness of these multiple choices format. I was made aware from the CNSC representative that an audit was completed to identify the effectiveness of the multiple choice. I would like to request that the results of this audit be shared and discuss as part of the Part II public hearing.

3.3 Personnel Certification

This writer has reason to believe that the failure rate for certification has been higher than expected. Whether there is at the power operator program at the NB Community College level or at the PLNGS certification course level creates the same problem that needs clarification. My understanding is that those writing their tests or exams for certification levels have not been as successful as expected. Question is why? This writer would appreciate an explanation.

During Part 1 in both CNSC and PLNGS presentations – it refers to certified level training for the operations group and success rate for those candidates. What is the current success rate and what steps are being taken to address any issues related to the success or failure of certified employees? It is my undertanding that there were improvements made to the training qualification and testing.

In respect to have sufficient certified staff successfully complete their training, I cannot think of any area more important as this one. It is recommended that this whole area be fully reviewed as part of this licencing renewal. Associated with this is the low number of available certified control room operators.

There does not appear to be all that many compared to other nuclear power plants as referenced in one of the tables of the 2020 ROR.

The response from the Senior NB Power officials at the Part 1 Hearing needs to be included in this Part 2 hearing along with a recommendation for the Commission pursuing this whole certification area with the applicant and CNSC staff for the public record.

3.5 Work Organization and Job Design

3.6 Fitness for Duty

These two sections are very important as it relates to potential problem areas that can impact the safe operation of this nuclear power plant. Despite all the robust regulatory rules, standards, and oversight, we are still dealing with the human conditions within a context of human vulnerability and fragility.

Psycho-social impacts – potential social problems commonly faced by members of the general public at large including employees of this nuclear power plant. This writer, as a social worker with over 40 years of experience, has seen the full range of such above cited factors can impact people lives affecting these individuals' families and work lives. Working and operating a nuclear power plant presents challenges to ensure employees are able to carry out their day-to-day duties to ensure the public are kept safe. I also raised this point in my submission for the 2020 ROR (Page 10-11).

3.6 Fitness for Duty

Fitness for duty includes the physical and mental health status for employees that will impact the performance of essential job duties in an effective manner and protects the health and safety of other workers and public.

Our whole society has been under stress and mental strain over the last couple of year with COVID 19 impacts. I am of the view that mental health problems and conditions are at times even more challenging to identify and deal with than physical health issues and their impacts on people's lives.

There is still stigma in society related to the self reporting mental health problems despite an improvement on talking about mental health problems.

The licensee application identifies the continuous behavior observation program (CBOP) in place identify such potential problem as may be noted in any negative behavioral changes by an individual employee. As part of this public hearing process, more information is required such as how successful is it, how many employees identified, how many removed form sensitive positions, how many went

into any treatment intervention. One area not covered in the social family problem area marital conflicts, separation and divorce proceedings, sick child at home or burdensome care giving responsibilities related to Senior parents all of which are very stressful.

Many of these psychosocial circumstances impact ones functioning during any crisis on the home front. These kind of psycho-social health effects need to be included. The commissioners hearing this licencing renewal need to drill down into this area as it may adversely impact PLNGS. Of all the variable impacting safety assurance at this facility fitness for duty is in my view Achilles' Heel on potentially weak spot simply due the human condition and life circumstances. The unpredictability and tendency to hide such psycho-social conditions place a higher burden on both the licensee and regulatory to identify and mitigate such problematic employees to ensure they get treatment to be able to return both to their duties. This whole area needs more information to reassure the public that these psycho-social is successfully managed.

Hours of Work

How is level of fatigue verified? There is no mention of these 12 hours shift periods over so many days with time off before returning to work. In my view, these 12 hours shifts are too long a duration. Several years ago, these 12 hours shift periods were reduced to 8 hours period at the hospital laboratory medicine units recognizing the high stress, concentration levels required for the medical laboratory technologist doing lab tests etc. The control room operators also have high stress jobs that require high mental concentration. This area is not covered in the applicant's application document in Section 3.6. it should be raised questioned at the upcoming May hearing.

Another area of interest is Managing Alcohol and Drug use. This writer considers this is another potentially problematic area of concern. There is mandatory random testing regulation in place REGDOC 2.2.4. This is a regulation this writer has been supportive of over the last few years. This licence is still not compliant with these regulations passed n 2017. There have been delays and slowness by the licensee to fully implement this random testing for drugs and alcohol.

What has been the problem to achieve full compliance? CNSC staff and applicant need to explain the delay as part of this public hearing process.

In this section of Fitness for Duty, it references to Total Health at NB Power including short-term such leave, long term disability etc. There are no statistics on employees' current engagement with these programs. How many employees receive services under the Employee and Assistance Program – same for workplace mental fitness, how many off-work under this category? Without statistics, it is for the public to assess how these employees' health issues are imparting PLNGS and its impact on the safe performance of this nuclear power plant well into the future licencing period.

This writer is requesting such stats be provided. On a positive note, this writer is encouraged to learn of the prevention programs available to employees to ensure good health. These may need to be enhanced and given even more of a priority.

Reference to accommodation and Employee and Family Assistance Program (EFAP). There are excellent except for one area they are voluntary instead of being mandatory. This is a mistake such programs are too important to ensure safe operation of this nuclear power plant if left at the discretion of the effected employees requiring such programs. This writer is recommending such program (E.F.A.P.) be made mandatory as a condition in their licence renewal.

The needs and wishes of the worker who need these treatment interventions are secondary to the needs of the needs of the public who want to be assured affected employees get the help they need. Opting out to participate should not be permitted.

4.0 Operating Performance

There is no doubt that nuclear safety is paramount to NB Power. Reference to the adoption of the defence-in-depth concept. Question is – does this concept fall into the regulatory framework or is separate from it. How does it fit into the regulatory regions?

The broader question here is how does the applicant justify this voluntary participation under some of the fitness for duty sections referenced above?

4.3 Reporting and Trending

Under trending reference to PLNGS submits various annual and quarterly compliance monitoring reports. Again, no reference provided for the pubic to review these to learn if in fact there is decrease in performance are occurring. A one-line reference to where such is located would have been helpful.

4.5 Safe Operating Envelope

What is the percentage of the time that PLNGS operate withing the safety operating envelop? One hundred percent of the time or was less than that? If so, what is the time frame period it operated under a safe operating envelop? An explanation would be appreciated.

5.1 Deterministic Safety Analysis

This is an important analysis summarized in the PLNGS Safety Report. As part of the review, it should have been one of the key document files just as CMD 22-H2.1 and CMD 22 – H2.2 were that the public use to prepare comments and their interventions. They are essential to have readily available so the public can easily access and provide comments.

One of the areas of interest in this Safety Report is assessing the impact of Station ageing considering the Station was built in 1983 and refurbished in 2004. This safety report was revised and issued to CNSC in June 2021. A summary of this report is posted on the NB Power website Probabilistic Safety Assessment (nbpower.com)

This safety analysis referred to as PLNGS Safety Report should have been given more prominence as one of the key documents just like CMD H2-2 are given.

5.1 Deterministic Safety Analysis

This intervenor was taken aback by the statement full implementation of the legally-binding REGDOC 2.4.1 may not be practicable or provide safety benefit beyond the current safety case. It is not within the authority of the licensee that makes this determination. The fact of the matter is that there is a regulatory requirement in place REGDOC 2.4.1, and it is up to the licensee to comply with everything in this regulation. Performing a gap assessment of REGDOC 2.4.1 does not exempt full compliance with this regulation. An implementation plan to close gaps in a graded manner was submitted to the CNSC on July 20, 2016 – six years ago. This current version of the implementation plan was submitted to the CNSC on December 19, 2018 – four years ago. PLNGS is progressing with the analysis identified in that plan. Why are there some delays in reaching out full compliance with REGDOC 2.4.1? This approach to compliance with REGDOC 2.4.1 could be perceived as resistance or avoidance to compliance in favour of a hybrid model or methodology. It is not clear as to what are the issues preventing PLNGS from full compliances of REGDOC 2.4.1. As part of this licencing renewal more explanation is required to explain those compliance delays.

It is noted that the last revision of the Safety Report (PSA) was issued to the CNSC in June 2021. This report should be front and center in this licencing renewal public review. It will be important to file the CNSC staff analysis of this report as part of this public review. This report is available on the NB Power website. It would be useful to have the link to the report included in the CMD.

This writer noted on top of paragraph on page 55 of 157 that updates to safety analysis were excluded as part of the REGDOC 2.4.1 gap closure on the basis of the listed rational. One would not want to come to the wrong conclusion that the licensee may be making up their own methods and rules to somehow avoid fulfilling complete compliance with REGDOC 2.4.1. All of this needs to be clarified as part of this licence renewal public review.

5.3 Probabilistic Safety Analysis

It is unclear as to what is the difference between Probabilistic Safety Analysis covered in 5.3 and the Deterministic Safety analysis covered in 5.1. they are both covered by REGDOC2.4.1 and 2.4.2. PSA is the compliance with REGDOC 2.4.2
Section 5.5 does point out some of the differences between these REGDOC requirements.

It appears that REGDOC 2.4.1 defines the requirements for severe accident analysis as a subject of accidents that is beyond the design basis of the Station what kind of accidents would be included here?

Climate Change Impact

5.5 Severe Accident Analysis

It is timely to include impacts of climate change such as intense weather event including extreme winds from hurricanes, intense rain falls events that could cause storm, surges, and flooding. During the Part 1 Hearing, one of the Commissioners identified climate change impact as an area that needs to be brought forward during this next hearing in May. This subject area is one of high public interest considering the severe weather events in British Columbia last year. Considering the location of this nuclear power plant, it is even more timely. Both the CNSC and the applicant need to be prepared to respond to public concerns over the anticipated impacts extreme weather event will have on Point Lepreau Nuclear Power Generating Station. This is one of this writer key areas of concern. It is recommended that the licence renewal include specific conditions in it to address and respond to anticipated climate change impact for this nuclear power plant.

7.2 Maintenance

There is no reference to managing obsolescence of the station equipment considering the facility was built 47 years ago. Positive to learn that maintenance backlog has been steadily improving over the past licencing period as a result of focused effort. Figure 12 on page 71 illustrates this improvement.

7.3 Structural Integrity

One of the issues of concern of this writer is concrete condition of the concrete containment structure considering this nuclear power plant was constructed in the early 1980s.

There was not detailed information in the CMC; however, I had the opportunity to obtain an overview and participated in meeting with the PLNGS subject matter experts on this topic.

Aging Management

This intervener has identified some specific issues and areas of concern including
Aging infrastructures (considering the age of those facilities such as potential problems related to state of concrete, electrical cables, and other equipment replacement).

This applicant has completed some research in this areas, well consulted with PLNGS subject matter expert as well as independent research on such potential issue associated with this specific area of concern is the entire area of aging management such as problem experience at PLNGS this winter with regard to the unplanned outage related to a mechanical issued to the pressure release disk supporting the turbine system on the non-nuclear side of the operations which turned out to be a much longer outage than expected due to difficulty replacing an obsolete mechanical part. This writer was contacted by a community member about this with far more details information that was initially released in the media report.

The writer followed up and the licensee subject matter expert met with me and provided a detailed explanation on the aging management program at the Station which is part of PLNGS commitment to safety. The Station maintains an Integrated Aging Management Program that is aligned with the requirements of CNSC REGDOC 2.6.3, Aging Management. This program ensures that structures and components that are nuclear safety-related meet their nuclear safety function by ensuring that potential aging degradation mechanisms are understood that inspection and maintenance activities are properly planned and executed, and that structures and systems are operated within their design limits with respect to aging considerations. I was also informed that PLNGS continue to develop comprehensive long-term asset management strategies which will help with the replacements of components as components and structures age, and planning for long-term obsolescence.

Although there is an obsolesce program in place, the general public, in my view, is not that familiar with it causing unnecessary worry that could have a bearing on the safe operations of those plants considering their age, one seems to be decommissioned and other unites identified for refurbishment.

There was another specific concern at the Bruce Nuclear Generating Station regarding the pressure tubes. There were recent publicly reported inspections of its reactors #3 and 6 that had to be shutdown indicating higher measurements of hydrogen equivalent (Heq) than prescribed, exceeding the limits set out in the power reactor of operating licence condition. The question was whether the pressure tubes were thinning. Another event at Point Lepreau earlier this year where a part was obsolete causing a longer than expected shutdown until that part could be replaced. Some of the concerns are:

1. The whole area of aging management and obsolescence is an area of concern as well as structural integrity considering the 40 years of age of these facilities.
2. Cyber security under general topic of security
3. Impact of COVID-19 on the safe operation of these nuclear power plants

Obsolescence Programs

Aging and obsolescence issues for components including for the non-nuclear side of these nuclear power plants has been a long-held concern of this writer. More specifically the problems experienced at PLNGS this winter with regards to the unplanned outage related to the mechanical issues to which the pressure relief disc supporting the turbine system on the non-nuclear side of the operation, turned out to be much longer outage then then expected due to the difficulty replacing an obsolete mechanical part.

Critical Spares and Obsolescence - it is my understanding that:

- PLNGS is managing any potential risk to the station by ensuring that parts and components that are required to support systems identified are procured and available for deployment on short notice.

- PLNGS employs an Obsolescence Program that is aligned with industry peers using both a proven Proactive Obsolescence Management System (POMS) that provides guidance on how obsolescence is interfaced with the procurement process and a passive obsolescence approach. Passive obsolescence has been in place at PLNGS for some time and as replacement parts are unavailable from vendors, replacement items are assessed through the established procurement review process to ensure they are suitable in fit, form, and function to meet the design intent.

Aging Management – it is my understanding that:

As part of the PLNGS commitment to safety, the station maintains an Integrated Aging Management Program that is aligned with the requirements of CNSC REGDOC 2.6.3, Aging Management. This program ensures that structures and components that are nuclear safety-related do not degrade to a point where they are unable to meet their nuclear safety function by ensuring that aging degradation mechanisms are understood that inspection and maintenance activities are properly planned and executed, and that structures and systems are operated within their design limits with respect to aging considerations.

In addition, PLNGS is actively developing comprehensive long-term asset management strategies. Detailed Life Cycle Management Plans are being developed for all nuclear safety related systems and significant station assets to ensure safe and reliable operation to the end of station life. The Life Cycle Management Plans address the need for future capital projects such as replacements and refurbishments, changes to preventive maintenance plans as components and structures age, and planning for long-term obsolescence.

There are two factors among others that can impact the integrity of concrete age and dampness and sealants to protect the concrete from being penetrated that could create cracks and resulting in concrete deteriorations. Considering the spent fuel rods are stored in this water filled concrete pools, one of my concerns in that our tiny, small cracks on the inside surface walls could over time create such small cracks and leaks. There is a need as part of this review to provide the public with updated information on (a) original construction standard (b) inspection reports and any improvements or preventative actions taken to ensure the concrete containment structures have not been compromised over the years from aging. It is noted under 7.3 (structural integrity) that there are two Canada Standards Association (CSA) standards. Both related to inspections and testing. This writer is respectfully requesting that the results of these inspections, tests and any actions taken be entered into the public record as part of this licencing renewal public hearing process. In the application under this section, there is no reference to the results or findings. No doubt they are filed somewhere with the CNSC, but the question is where? For the record, this writer did request an information session from PLNGS on this subject of concrete integrity and aging/obsolescence management. This briefing was very helpful to the writer's understanding on this area of interest

7.4 Aging Management

This entire area under ageing management is one of the top areas of concern of this writer considering the age of this facility and the recent problem acquiring a piece of equipment that resulted in a longer shutdown period.

This writer was reassured to read "The PLNGS is focussed on ensuring that structures and components that are nuclear safety related do not degrade to a point where they are unable to meet their nuclear safety function". The whole area of obsolescence of components is one that needs continuing attention and action plans to ensure the part on component is available where such component may no longer be manufactured. There needs to be a centralized warehouse where these materials are stored for future use. In many cases such components may no longer be manufactured. There needs to be a centralized warehouse where these materials are assembled. In many cases such components may need to be re manufactures as they may not longer be available.

7.5 Chemistry Control

Under planned improvements – the question here is why didn't the licensee commence such improvements during the current licensing period? How long was the licensee aware of this need to upgrade laboratory and on-line instrumentations?

There is no explanation as to the reason to make such improvements.

7.6 Periodic Inspection and Testing

Reference to PLNGS carries out in service examination and testing of the Station Reactor Building. There is no information on the results of such important testing. It would have been helpful to have a summary at least of the results of such examinations and testing. This writer would like to see the results tabled into this public review to allow the public to learn of the status of the concrete containment structures for this nuclear power plant.

Inspections and Test Certificates

The document referenced an on-going monitoring and inspections of pressure vessels - this needs to be made available. Again, important documents mentioned but no reference to where they can be located or summaries of findings provided – a link to this information would have been useful. Since this nuclear power plant was refurbished in 2005, with the replacement of the pressure tubes, one would expect that these pressure tubes are maintaining their structural integrity. This is only an assumption on this writer's part, clarification on this conclusion would have been helpful from the applicant in this 7.6 section – last paragraph on age 81.

8.1 Application of ALARA

Reassuring to read that individual and collective dose are being managed well below regulatory and administrative limits.

8.5 Estimated Dose to the Public

From a public need to know perspective, the following statement from the Section 8.5 titled "Estimated dose to public is very important and reassuring". The estimated dose to the public has been maintained well below the design target for the Station and continues to be a very small percentage of the regulatory limit of 1000 uSv per year for members of the public. One question raised in Figure 2.3 page 88 is why was there an increase from 2018 to 2020? There needs to be an explanation provided. One would like to see such releases decrease not increase – even if such doses are well bellow the safe level – more explanation required to explain the increase from 2018 to 2020.

10.0 Environmental Protection

This writer questions whether the environmental management system includes provisions to control the releases of radioactive and hazardous substances into the environment by employing the most achievable control technologies and method available. This should be the goal not the status quo approach. It is recognized that there are two other parts of this EMS namely reduced the generation of waste and prevent adverse environmental effects. These latter two features of the EMS are positive and meet public expectations. It is the first one that is problematic. The renewal licence needs to include conditions for the applicant to develop and implement a prevention plan to the release of radioactive and hazardous substances into the environment. This would be another recommendation offered by this intervenor.

10.2 Effluent and Emission Control

These should have been a reference / appendix to provide the public with compliance or non compliances under the DELG's approval to operate which deals with releases to water through various effluent streams.

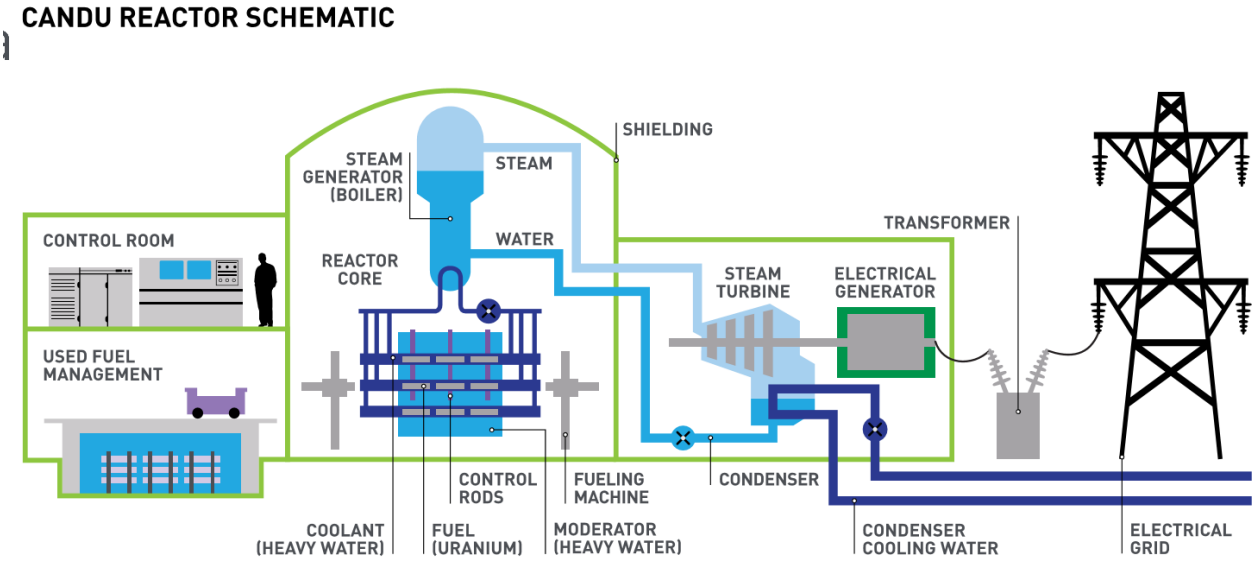
How many non compliances under this approval occurred?

10.5 Environmental Fish Assessment

This section is of noteworthy concern, namely this thermal plume from the cooling water discharges from the Station. A thermal plume assessment of the cooling water discharge was completed but no summary of the impact results provided. This is another area that requires more updated information on the impact of such a practice. It is recommended that CNSC staff and the applicant provides the public with more information

including a “link” on the impact of this thermal plume going into the Bay of Fundy. There is a thermal plume study but need needed to have been included in the CMD document. This writer has reviewed the condensing water path and discovered it is a fully closed loop of sea water from the Bay of Fundy.

See diagram of condensing system. https://cna.ca/reactors-and-smrs/how-a-nuclear-reactorworks/



11.0 Emergency Management

11.1 Emergency Preparedness

There is reference to a mutual aid agreement. One such agreement this writer has learned of is with the Saint John Fire Department. This raises the question as to what role would that fire service play? Further if there was a nuclear incident at PLNGS, an emergency preparedness action had to be implemented – what would be the impact on the Saint John area? Would there be any need for evacuations? Or would such action be unnecessary since Saint John is well beyond that emergency zone of 20 km?

This is an area of interest as the population of Saint John 40 km from the plant may not be impacted at all. What about the drinking water supply for Saint John, could it be contaminated form a nuclear accident release? This is the type of information that the public may be interested in.

It is my understanding that the emergency planning zone is 20 km around the plant and all the emergency preparedness would focus in that geographical area. For those of us living in 30 to 40 km from PLNGS, please provide clarification on these matters in respect to who and what are ethe responses.

Some people have concerns that if there was a nuclear accident event release, event could it have the same impact here in Saint John as in this emergency planning zone. If such as nuclear accident release of radioactive material occurred would areas withing this 20 km be declared unhabitable – similar to that nuclear event in Russia – Chernobyl? Again, the public would benefit from factual information to counter any concerns they may have.

11.3 **Nuclear Emergency Preparedness and** Response

Nuclear Emergency Preparedness and Response does provide some general information in respect to New Brunswick Emergency Measures Organization (NBEMO) but could benefit from additional information to help the public understand how such a nuclear accident would be handled in the city of Saint John. Additional reference information would have been helpful in section 11.3 – perhaps a link to the provincial nuclear emergency plan which had a clear picture of the 20, 30 and 50 km zones.
https://www2.gnb.ca/content/gnb/en/departments/emo/NuclearEmergencyProgram.html

The action for each of these zones is of interest to the public.

Section 11.3 does note that there are drills and exercises around nuclear emergency preparedness and response. One was in fall of 2021 (Synergy Challenge 2021). This is reassuring to learn where over 40 agencies and over 1000 participant were involved. The writer was pleased to see that a cyber security event as well as a radiological emergency was covered. It is recommended that a brochure be prepared not just for the 20 km emergency planning zone (EPZ) but for the communities such as Saint John and region outside that zone. Emera Brunswick Pipeline sends out an information pamphlet yearly for those of us who living in closer proximity to their natural gas pipeline.

12.3 **Solid Radioactive Waste Management**

This is an important area within the context of NB Power seeking a 25-year licence renewal period. NB Power and the SMR vendors developing small modular reactors that will have close association with PLNGS's nuclear waste material that will be used in these new technologies. Moltex proposes to use the available nuclear fuel from PLNGS. SMRs are planned to be available in the next eight years by 2030. There is no reference in Section 12.3 about this proposed development that will use up the solid radioactive waste stored at the waste management site. Since NB Power is seeking a licence term well past 2030, it would have been in the public

interest to at least clarify and advise the public on how this stored nuclear waste is expected to be linked into the on-going development of the small modular rectors. It is understood that SMR proposals would be under a separate licence and not part of the NB Power licence currently under review.

Associated with this waste management section is the Government of Canada is currently reviewing Radioactive Nuclear Waste Management Policy. There is no acknowledgment of this important policy review. This is problematic considering this new binding policy could have for reaching implications and impact on current waste management practices, all part of this licencing renewal. It needed to be at least acknowledged. How will this new radioactive nuclear waste policy affect waste management practices of PLNGS? Clarification is respectfully requested. This new policy is expected to be approved during the early period of the new licence renewal.

More information is respectfully requested as part of their licencing public review.

13.0 Security

Considering what took place in Ottawa and other part of Canada over the last few weeks with truck blockages, this area of security has to be revised to protect access to PLNGS. What would happen if protesters used these large transport trucks to block or plug up access roads to this nuclear power plant making it impossible for certified and other staff to get to their jobs at this Station? The current PLNGS nuclear response team and equipment I suspect would not be able to deal with such a threat. In light of recent security events in Ottawa, this writer is recommending a review of its response capabilities. Further, CNSC needs to address this new type of threat as it could potentially impact other nuclear plants in Canada. At the May 11-12, 2022, Part II Hearing, the public would welcome some reassurance that all threats including this new type can be managed. As part of licencing renewal, conditions under security, there needs to include a new threat assessment to take into account use of transport trucks to block access. Another more recent security issue is the recent terrorist attack of the nuclear plant in Ukraine.

13.2 Cyber Security

This is one of the biggest threats to any nuclear power plant

Section 2.12 Security

A one sentence statement on cyber security, on this fastest growing threat worldwide, is totally insufficient to provide the pubic with appropriate information on one of the most significant evolving threats in the area of security. In my view of the current regulatory rules are not strong enough to protect us from threats from cyber-

attacks on nuclear power facilities. In fact, nuclear security regulations are just currently protective enough. This conclusion appears to be the basis of CNSC current nuclear security regulatory modernization currently in multiple stakeholders' consultation process prior to more formal regulatory public consultations expected in later this year.

This writer had the opportunity to participate in an information session on April 13, 2021, (Edoc#6498526) which reinforced my view that more has to be done to protect these nuclear power plant facilities from cyber attacks which are a growing threat where United State government sites, energy infrastructures such as a gas pipelines as well as City of Saint John all been victims of cyber security attacks and ramson ware incidents.

Cyber-security program and or cyber security measure need to be greatly strengthened to prevent. It is reassuring to learn of expected regulatory changes to deal with these cyber-security threats. Some of these threats include:

1. Thefts of nuclear material help by licensees.
2. Sabotage or safety and/or associated systems that if compromised would result in unplanned doses to workers or member of the public, and releases to the environment.

The 2020 ROR under 2.13, P. 54 should have included a statement to the effect that cyber security is a real threat to nuclear sites and CNSC takes it seriously by taking steps to update and modernize its nuclear security regulatory framework including cyber security. Nothing to the effect was included in Section 2-13. The public want to know of plans and actions that will be taken to protect sites on this important area of security. They certainly do not need the details but need to know that CNSC takes this area very seriously and Section 2.13 P. 54 was an opportunity to do this but failed to advise of the recent public consultation process on-going.

Again, CNSC is revising its regulatory oversight tin this area. Will PLNGS be able to implement such upcoming changes? The new condition should include progress reports on how the applicant will be implementing these new changes.

Section 16.4 Indigenous Consultation

In reviewing Section 16.4, NB Power recognizes the importance of communicating and engaging with First Nations communities in New Brunswick. This writer recognizes the CNSC efforts in engaging with Indigenous communities, however it is important to ensure that these commitments continue to increase in the future. The engagement efforts of the licensee are recognized in Canada Indigenous inclusion works.

It was recently publicly reported that the land claim legal action as been launched and is before the court in New Brunswick. It is my understanding that this recently filed land claim include lands on which PLNG is located. Recent public announcement indicates that it could take up to 10 years before a final court decision. This licensee is requesting a 25-year licence renewal period. This court land claim will be on going during this licensing period. This is a complex matter that could impact the land ownership of PLNG property. Therefore, both the applicant and the CNSC will need to have a strategy to respond to this land claim implications. What is the position of PLNGS and CNSC on this matter?

One way to respond to it is to include a condition in the licence renewal that would include regular update on this land claim matter. If at some points in the future, there is a settlement – what potential opportunities or impact this could have on NB Power's ability to continue to operate their nuclear power plant. Both the applicants and the regulatory need to be cognizant of these matters as they will be unfolding during this licencing period.

Engagement

The application by NB Power under Section 16.4, it was positive to read "These initiatives have also been extended to engage with consultative bodies, Tribal Council and Indigenous Leadership regarding the statin specific areas of interest and small modular reactors". It is interesting that the applicant makes it clear that this licence renewal has nothing to do with such SMR developments. It that is the case, why does the application include SMRs?

There are some other references to SMRs in the license application. During this 25-year requested period, these SMRs projects could be up and running if approved, with PLNGS involved with the nuclease waste aspect as a fuel source (MOLTEX) technology. In order to lessen public confusion around this licence renewal, it would have been better not to include any reference to SMR.

Overall Section 16.4 on Indigenous Consultation describes some very strong efforts and engagement activities such as NB Power created a First Nation Cultural Awareness Orientation Computer Based Training Module. The last paragraph in Section16.4 is noteworthy. Final comments about public engagement, section 16.4 licensee public information program both in its scope and quality. This writer cannot identify any unmet needs, deficit, or issues of concerns – very well laid out in section 16.8. Those responsible needs to be recognized for these efforts in this quality and comprehensiveness.

SECTION B Comments on CNSC Staff CMD

Introduction

As part of my written intervention, this writer reviewed this document to identity issues of concern, questions, and comments as part of the public review process, specifically as part of Part II – Commission Public Hearing on May 11-12, 2022.

The first part of my written intervention (PART A) centered on the NB Power application document referred to as CMD 22-41. Methodology used in preparing for the public hearing was to carefully and thoroughly read this CNSC staff document, present commentary in a critique style format on all the various sections, identify issues of concern, ask questions, and make recommendations related to licensing condition.

EXECUTIVE SUMMARY

CNSC does point out an important piece of information that have implications for climate change impacts potentially affecting this nuclear power plant. That is, PLNGS is located on the Lepreau Peninsula, on the northern shore of the Bay of Fundy. This information alerts the public that the Station is potentially vulnerable to the impacts of intense weather events, sea level use, storm surges and shoreline erosion that could interfere with the safe operations of this nuclear power plant. The Executive Summary provides rational as to why PLNGS licence should be renewed for a 20-year period as opposed to the NB Power period of 25 years. This writer is of the view that 20-year period is too long a period as noted in my commentary on CMD 22H-1 above. Certainly, the executive summary is a key element of the CNSC staff report but when the CNSC staff spell out their recommendations on page 2 of their submission. The public intervenors may ask why plough through all this documentation to identify and question the application material if it appears that it is a forgone conclusion with decision to be made to approve the licence renewal. In the interest of public participation and impact before the Commissioners at the public hearing,, it would have been more appropriate to place the Executive Summary or at least the CNSC recommendation at the end of their submission. It would leave the door open that the intervenors could be persuasive enough to influence the Commissioner of a different decision. This Executive Summary is a key element in the CNSC but its place in their key

submission should have been left towards the end of their submission after identifying key information to justify their recommendations. Placing it on page 2, somewhat takes the wind out of the sails of the intervenors who may have a different recommendation on the licensing and time frame.

The writer wishes to state that based on my various reviews of Regulatory Oversight Reports participation at various earnings over the years, I have full confidence on both regulatory legal frameworks as well as the CSNC staff expertise charged with the responsibility to keep PLNGS safe for the public. Having reached that conclusion, does not mean that though questions cannot be asked, and issues of concern remain despite the CNSC analysis. This is the approach taken in reviewing the CNSC staff submission CMD 22 H-2. This writer values the public's role in the oversight process for the licensing renewal for PLNGS.

1.2 Overall Conclusions

It is clearly reassuring to read the section that CNSC staff have reviewed NB Power licence application and supporting documents to conclude NB Power's performance during the current licence term that confirm compliance with applicable requirements. Further, CNSC staff confirmed that NB Power's performance was satisfactory and demonstrated a trend of stable performance throughout the licensing period. The writer wonders why words of "demonstrate a trend of stable performance" was used – what does that mean. This needs clarification as to why the regulator would use word "trend". What was going on prior to this "trend". The fact that the current licensing period was for 5 years instead of usual 10 year needs to be explained to the public. The number one key CNSC statement on page 2, that the public need to read is "NB Power's performance throughout the current licensing period demonstrates stable safety performance and indicates that NB Power comply with applicable regulatory requirements throughout the proposed licence period". CNSC mandate is all about safety and reading this provides this writer with full confidence that PLNGS is an will continue to be operated safely. That is the key bottom line for this intervenor. Now the question is whether such a conclusion can be made during the next licensing renewal period?

2. MATTER FOR CONSIDERATION

2.1 Environmental Reviews

This writer was equally reassured as outlined in the Environmental Protection Review that CNSC confirm that NB Power implements and maintains effective environmental protection measures to adequately protect the environment and the health of persons.

2.4 & 2.5

In this section's titled highlights NB Power's Licence Application, it states that CNSC staff note that NB Power applied for a 25-year licence but did not adequately substantiate the requested licence term. CNSC, however, supports the renewal for 20 years.

This writer is not in agreement as it deviates from the normal period of 10 year. As noted above in my submission a 20- or 25-year period is far too long a period before there is another extensive and robust public review process. As well there is just too many moving targets and variables over the next 20 years to justify such a long licensing renewal period.

The Regulatory Oversight Report for Canadian nuclear power plants that includes 37 pages section for PLNGS, is not adequate even with the public hearing process. The fact that these SMRS are being planned and expected to be in place by 2030 with this nuclear powerplant playing a role, is another reason for a shorter licensing period of 10 years. Despite the fact that SMRs will have a separate licence and robust public review, PLNGS will have a connection to their development.

There could be an impact on this new licence renewal condition and therefore waiting for 25 or 20 years for an extensive public review is just too long in relation to this SMR developmental context.

2.6 Periodic Safety Review

PSR is a critically important assessment of the state of the nuclear power plant and its performance along with identification of any factors that would limit safe and continuous long-term operations for another 20 to 30 years.

There was one completed in 2010, as noted in this section 2.6. it is noted that NB Power in its application commits to complete additional PSRs in accordance with REGDOC 2.3.3 prior to the end of PSR validity period. completed just

This Periodic Safety Revie w was submitted in June 2021 prior to the licensing renewal process. Such an important document should have been included along with the document referred to as "Commission Member Documents CMDs in addition to the other key public review documents.

Yes, the refreshed PSR was completed and submitted to CNSC prior to the licence application to allow CNSC and the public to get fresh current assessment on the safety issues. Such a new PSR appears to be focused well into the future – 10 years ahead. Another reason for a 10-year licensing renewal period is to allow for an update and progress report.

2.7 Licensing Term

It is noted that there are notable improvements to the regulatory framework, regulatory oversight and regulatory practices including #4 CNSC oversight through the annual Regulatory Oversight Report for Nuclear Power Generating sites. The current public review and content information on PLNGS of 38 pages or so is just not robust or thorough enough with just a small number of public interventions is just not strong to meet public oversight and expectations as one of the CNSC formal review oversight processes.

This is not to say that the other 13 tools or means listed on page 15 & 17 a not effective regulatory frameworks and processes. It is just the ROR that cannot be considered sufficient if it were to be the only one used. Granted that there are multiple safety oversight actions and oversight activities to ensure this nuclear power plan is safely operated at all times. As noted above, this writer is more comfortable with a 10-year licensing period as is the practice around the world for nuclear power reactors as listed in Table 2. Page 14

I see no justification why this licensing period should be changed.

This writer does want to stress that the notable improvements to the regulatory oversight and regulatory practices listed on pages 15 & 17 are ones that provides strong public confidence that CNSC is well equipped, staffed, funded and has been very effective in ensuring that this nuclear power reactor has and will continue to be operated safely. Having a number of close family members living within two

of these nuclear generating stations (Pickering and PLNGS), I am very satisfied and reassured that regulatory oversight is robust, strong, and effective. This does not mean that this is a permanent conclusion over teh next 20-year period. This is why public oversight is so important.

Having said that does not mean that ENGOs and community members such as this writer should be complacent and not be engaged in active participation in this licensing renewal public review.

2.7.2 Conclusion

After reading the above sections, this writer does not question that CNSC staff have a robust regulatory framework and conduct continuous regulatory oversight activities. Further, this writer shares the CNSC staff conclusion that they are confident that oversight activities and reporting will continue to be effective. My issue is centered on the public review proceeding as is currently in place for the licence renewal is just another robust public oversight process and that extra guarantee that ensures this nuclear power rector facility continues to operate safely. There is nothing wrong form a public oversight perspective to have a 10-year licence renewal period. The Achilles heel or weakness in the CNSC justification for a 20-year licensing period enters on the public review process both in term of oversight information sharing and the public review process itself as is currently underway.

3.1 Management System

3.1.2 Discussion

This section identified an area of concern to this writer. The CNSC identified a non-compliance related to change management in training not being performed in a systematic way in NB Power certified licensing program. This is not any old routine training program but a certified one that is key training program. This writer has noted above in Part 1 of my submission identified even more significant area of concern with certification. This is related to the failure rate of candidates enrolled at their NB Power Operator Course or at the PLNGS own Certification training program. This was identified by this writing during last year public hearing on the Regulatory Oversight Report of my submission. If I recall, Mrs. Velshi, CNSC President asked a question on the certification program to the NB Power representative. The answer was very brief with limited response to this area of certification training. This writer recommends that full disclosure in detail be provided as part of these public review proceedings on this key question of certification training including success or failure.

Management of Contractors

This writer is pleased to learn that corrective actions plans being reviewed by CNSC to address NB Power's proceeding document was not being updated and resolution reports were not consistently categorized as required for NB Power Contractor Management Process. This may seem to be a minor area of low safety significance but the whole area of contractor management and involvement in a nuclear plant is not a minor area in fact issues re contractor activity has been raised currently and in the past Regulatory Oversight Reports (RORs). With refurbishment and other work required there is always the potential for problems that could impact safety at PLNGS as well as other facilities using so many contractors. CNSC needs to keep a close eye on this area of contractor management

3.2 Human Performance Management

AS noted above in my comments on NB Power's application, personnel training especially around certified control room operations, this is an area of concern to the writer. My concern is reinforced with the CNSC information on pages 29 to 31 with the following statements. "During an inspection in the fall of 2021 emergency exercise, it was identified that two evaluators were not evaluation qualified". Another statement "In June 2020, CNSC staff identified finding of negligible significance related to training changes management, training database alignment and alignment of control room operator and shift supervisor training program documentation (P.24). Good to see that CNSC will be following the applicants corrective action plan, but the action plan will be implemented over a year period (approximately). This section does not address the higher than anticipated failure rate for certification of control room operator as this writer identifies above in my commentary. There should have been an explanation regarding this failure rate and which steps being taken to correct it. I would like to see this issue added to the CNSC monitoring and corrective actions to ensure compliance verification in this area.

Regarding the number of qualified personnel, for all certified staff positions, the table chart on number seems low (SEE 2020 ROR Section on PLNG) not much room for any sickness or leaves of absences etc. This writer s concerned about the low availability number for these certified control room operators. What if they all got sick at once? Should be more in reserve ready to replace any who are unable to work in that critically important area. The information in CNSC Staff Report page 30-31 is worrisome and may be an indicator that personnel certification needs to be beefed up both by this

applicant as well as CNSC. There needs to be a condition to this effect in the licence renewal over and above the ongoing oversight activities of the regulatory. This writer questions the statement on Page 30 top part: "CNSC staff conclude that personnel certification process for certified personnel at Point Lepreau Generating Station meets regulatory requirements (P.30).

Work Organization and Job Design

Please to read that the CNSC staff confirms that NB Power has implemented a change to move from a five crew to a six-crew shift schedule as part of the implementation of REGDOC 2.24 Fitness for Duty – Managing Worker's Fatigue.

Fatigue Management and Hours of Work

As noted above in my earlier comments, I am concerned that the current 12-h shift period with many days at that level may be too long considering the additional life stressor that employees along with the rest of us may be coping with. This section needed to have included the shift/hours of work scheduled. It would have been helpful not withstanding that such information provided somewhere in these related licensing renewal reports.

Managing Alcohol and Drug Use

On the human side, managing alcohol and drug use is a potential challenging area in the operation of a nuclear power plant. Those substances are used in society. This writer certainly agrees with CNSC that "Managing alcohol and drug use is another important aspect that affects fitness for duty".

REGDOC 2.2.4 – Fitness of Duty Volume II: Managing Alcohol and Drug use was published in 2017. The licensees requested changes and delays which resulted to reach the point that "NB Power committed to implement version 3 by July 22, 2021, with the exception of random testing which would be implemented by January 22, 2022. During that 6-year period – was safety compromised? Were there incidents, events that could not be managed during this six-year period? This section does not report on the number of events or incident where alcohol and drug use were identified as problematic. This whole area especially now that marijuana is legalized, needs to be one that both the applicant and regulatory have to be vigilant in respect to REGDOC 2.2.4.

Reportable Events: Table 6, Pag 38

There is no definition as to what constitutes a reportable event. Number of such are listed by year in Table 6. Are they the same as "significant events"? What kind of events were they? This section, since it reports on "reportable events would have been best placed to include the definition even though there is regulatory reference REGDOC 3.1.1. Not everyone participating into the review can drill into these REGDOCs including 3.1.1.

3.3.3 Summary

Past performance, challenges and proposed improvements are presented in the following subsections. This is a major part of the CNSC staff document.

3.3.33

Report states – NB Power is making progress towards developing accurate understanding of plant conditions during postulated accidents necessary for effective decision making and used of the Severe Accident Management Guidelines. This looks like work in progress – what happens if a severe accident occurred tomorrow?

This writer is also concerned to learn in Section 3.3.3.3, that there is a need for an upgrade to the moderator level instrumental. That required date of completion of this IIP action in 2027. This is quite a long way off for such an important area as Severe Accident Management Guidelines, even though a compensatory measure is in place.

Section 3.4.4 Discussion

It was reassuring to read that "CNSC staff did not observe any areas of non-compliance with the regulatory requirements. CNSC staff determined that NB Power has demonstrated improvements in the safety analysis (safety control area) SCA and continues to maintain a high level of safety".

Page 42 Last Paragraph

Reference to NB Power's submission for the trending of this aging parameters. What are these aging parameters? Once identified is the reactor's inlet header temperature that was identified to be higher than determined from previous trending data. When reading, this one who is not familiar with the

mechanics of a nuclear reactor, has to ask so what? how important is this in respect to the safe operation of this facility. So often in the CNSC report CMD-22-H-2, information is identified with any explanation of what or why it is important to issue a staff action item. There are many examples of such information but as a document for public review it would have been helpful to have a brief explanation as to why such a problem or issue is important to correct. Are these minor, moderate, or significant?

Another example on page 43, where NB Power continues to develop a methodology to address the large break loss of coolant accident.

This sound very serious if it were ever to occur. This writer notes that a methodology has not been yet finalized and just continues to develop. Also, Bruce Power is taking the lead in the development and implementation of probabilistic analysis techniques for break frequency of large diameter led transport piping.

This writer is concerned that these solutions are taking too long to finalize what is such a large break were to occur next week. How prepared would NB Power PLNGS be to manage such a large break? This kind of problem solving should be expediated so as to be prepared on a more timely basis. The licence renewal conditions need a condition to ensure this important developmental work is done at a faster paste. There are many other long draws out processes and deadlines that need to be expediated since most of them have potential safety ramifications. CNSC needs to review those with the applicant to determine if current deadlines are adequate in respect to addressing safety released matters even if considered of low safety significance. These may be considered low today but upset events breakdowns do occur and they could quickly become moderate to severe safety significance. I would recommend the commissioners take a look at all the timelines to determine if any need to expediates at a faster timeline pace.

Management of Safety Issues

In respect to the three Category 3, CANDU safety issues (CS1) that are still open for Point Lepreau. The question is what happens if there is a large loss of coolant accident next month. It appears that there is an on-going analysis to be submitted – again these problem-solving developments need to be expediated at a faster pace so that PLNGS will be ready and able to deal with such a large loss of coolant accident. I am confident that the Station would respond to such an unlikely event today –

however why do we continue to have analysis? From a public perspective, it is important to inform the public what happens if such a break did occur, and all steps are being taken to assure it can be safety managed. Reading this section of the report, it does not have any context and it does not inform the public of the potential impact of such a break or more importantly if one was to occur next week – would PLNGS be able to manage such an event? Delays to complete and resolve are not comforting to read when dealing with such a severe event at a nuclear power plant. Time is of the essence to close those processes do not keep then "open" as reported in this section on page 45.

3.4.3.1

CNSC determined that NB Power past performance has been satisfactory. For those unfamiliar with this word in context to CNSCs use of the word, it is suggested that an explanation / definition of satisfactory be provided. Most people reading the description term may only understand it within the colloquial dictionary use. Satisfactory compared to fully satisfactory is an important distinction in the operation of a nuclear plant.

Site specific hazard assessment site characterization section.

The regulator, CNSC concluded that there is no evidence of any significant safety risk identified in the seismic area. NB Power submitted their updated Level 1 seismic PSA report to CNSC in June 2021. It is noted that CNSC staff review of this report is ongoing. AS part of the licensing renewal process, the final results of the CNSC review need to be shared at the upcoming hiring. The regulator needs to update the public on this result of their review.

Tsunami Floods

It is reassuring to read that the modelling results indicate that none of the scenarios considered would produce water levels high enough to reach the site grade of 13.7 m. Above main sea level, even for the scenarios modelled at the highest astronomical tied level of 4.0 meters above mean sea level. Component design cables covered under structures design / system design P. 50-51. Considering that this faculty was built in 1983, this writer has had a long-standing concern on the state of these ageing cable at this nuclear power plant. This community member has consulted with officials at PLNGS on the aging management program for cables and other components. The regulatory requirements under REGDOC 2.6.3 aging management provides this writer with the assurance that these cables are

carefully monitored and repaired or replaced when required. The only lingering issue is how are some cables accesses when buried behind concrete walls and floors. It is assumed all cables are accessible. This community member has reached the half-way point of carefully reaching and identifying any issues of concern or matters that may not be adequately addressed by CNSC within the areas of the CNSC CMD -2 H-2 document as part of this public review. It is very clear to this writer that any issues of concern for the most part have been not only identified but thoroughly addressed by the nuclear regulator. The level of robust oversight and actions required by CNSC are impressive both from the regulatory framework perspective (REGDOCs) as with the extensive oversight work delivery the expert staff charged with the responsibility to ensure this nuclear power plant is operated safely No stone was left unturned in its mission. Having stated that conclusion there is still room for increased community/public oversight involvement both in terms of receiving these reports as well as questioning some of the funding and action plans required including timelines permitted to complete actions. At this point in my review, I will highlight just the key remaining issues of concern to this intervenor under equipment fitness for service, equipment performance.

This section notes “in 2021”, CNSC conducted an inspection of the spent fuel bay and had 9 compliant findings – what were these? One of my concerns regarding the spent fuel bay (s) is the state of the interior concrete walls. I am concerned about small cracking in concrete walls that could expand and leakage through the walls of this spent fuel bay. This kind of issue was identified by another community member in Ontario who reported to me that such cracking has or could be occurring in a spent fuel bay at a nuclear power plant in that province. This has not been substantiated. Did CNSC inspection find any cracking or seeping of radiated water into or through the concrete? I would like to see this clarified. As part of public review process for licence renewal of PLNGS, it will be important to reassure the public that both the design and surrounding walls of this water filled fuel bay pool that hold the radioactive material in protected on all the walls including the floor along another tank below to ensure that none of this radiated water ever escapes even in small amounts as with seepage. This information would offer reassurance to those community members who are concerned about how water and concrete could create deterioration such as what has occurred at NB Power’s Mactaquac Hydroelectric Generating Station. Please have someone describe what are the safeguards protection in place in the spent fuel bay or water filled pool that contains radioactive fuel bundles to be temporary stored. This is an important area considering these spent fuel bays were built in 46 years ago.

Aging Management

For this community member, aging management including obsolesce is a very important area of concern for one reason, this nuclear power plant was built in the early 1980's over forty years ago. The CNSC in the first paragraph under aging management, Page 157, rightfully recognizes that changes occur overtime and with use. Both physical aging and obsolescence Systems, Structures and Components that may directly or indirectly have an adverse effect on the safety operation of the reactor facility must be addressed. My concern in this area is validated and consistent with the nuclear regulator Key area on how effective and well managed this area at PLNGS is.

In respect to the section under management of this area, this writer noted that CNSC staff inspected the aging management program at PLNGS to verify compliance with REGDOC 2.6.3. This writer was not happy with what comes next in this section such as: CNSC staff identified eight non-compliance, including discrepancies between the implementation of the aging management process and the governance documents (I assume that REGDOC 2.6.3). CNSC staff determined that the safety significance of the non-compliance was low. Point here from this writer is there was a safety significance albeit low. It was low but non-compliances in this area can or could lead to moderate or higher safety significance later. This write was reassured. CNSC staff reviewed the corrective actions taken by NB Power and noted improvements, clarifying the process alignment with governance documents and requirements of REGDOC 2.6.3. Finally, CNSC staff concluded that NB Power corrective actions in response to the inspection findings met regulatory requirements. This is just another example of CNSC staff effective oversight on their regulatory responsibilities to ensure along with the licence the safe operation of the PLNGS.

Fuel Channels

Compared to several other nuclear reactors in Canada, that have not yet been refurbished, PLNGS in 2005 had all its fuel channels replaced during that refurbishment. This is good but it is still 17 years since that fuel channel replacement work was completed. How long will these fuel channels last? So important to learn that NB Power has a fuel channel inspection program and continues to maintain fuel channel aging management plans as part of this licensing renewal public review, more information on the inspection results / monitoring needs to be tabled into this public record as part of the licensing renewal public review process.

Reactor Building Structure (P.59)

In respect to aging management, the condition of the reactor building structure at PLNGS is of paramount concern and interest to the writer considering the structure cited were built in 1983 – about 40 years ago.

This write understands that there are thick walls, special coating, and liner system in place. Pleased to learn that the reactor building basement was replaced during refurbishment in 2012 and the estimated service life for these liners is projected to end in 2052. There is a last one area of concern and question, it is my understanding that underneath the concrete foundation floor of the reactor building with a rock base. There is no protective adhesive sealant underneath the reactor concrete floor. I saw a reference to this in the 2010 PSA report. This writer may be mistaken and if so stand to be corrected. Please describe what protective materials are underneath the concrete floor of the reactor building? Would it be subject to concrete deterioration from water below the foundation floor? Explanation would be appreciated.

Periodic inspection and testing Page 60-61

These inspections carried out by NB Power on non-nuclear pressure boundary components that have the potential to impact nuclear safety should they fail during operation as the CNSC stated on Page 61 top paragraph. If they are that important why is NB Power in the process of developing a periodic inspection for these pressure boundary components? This program needs to be fast tracked so those inspections can be completed with results in case repair work is required. This is another example of these drawn-out steps before action may need to be taken. This work should have been finalized and completed over the last 5-year licensing period. CNSC needs to create a database of all these long-drawn-out action items with firm expectations and completion deadlines for filing to CNSC. A special data base record needs to be compiled so that the public can check on the progress of those action items.

3.6.3.3 IIP Improvements

The first paragraph of this section states “The Point Lepreau Nuclear Generating Station Periodic Safety Review #2 (PSR2) IIP was submitted on April 30, 2021, that includes enhancement plans regarding specific area of the fitness for service SCA. Key ones identified by this writer include aging

management structural integrity and periodic inspections and testing. Question for the Commissioners is why weren't these enhancement plans done well before April 30, 2021? – 9 months before the licensing renewal evaluation registered? This kind of enhancement and inspection/ testing work on key elements of concern to this intervenor should have been initiated and or completed such as testing / inspections during the last 5-year licensing period.

This information would have been helpful to the Commissioners in their decision-making process especially for a 25-year licensing renewal period requested by the applicant. This is another reason that NB Power should not be granted a 25 or 20 year licence. The inspection/testing action results could have been presented during this public review. At this point on the eve of a licensing decision, NB Power is developing a comprehensive containment penetration equipment program plan (EPP) which includes all penetrations liners and strains gauges. This writer and the public would have like to have had he results of these evaluations well before December 2023.

The next Licence Condition Handbook needs to have a condition in it to ensure that this plan is expediated and work commence with the results ready for 2023 ROR.

3.7 Radiation Protection

The words "reasonably achievable" raises the question whether this definition or objective is stringent enough. For example, in the US clean Air Act, the most stringent one is most achievable control technology (MACT). Thankfully, the most economically achievable is not the benchmark. A definition and explanation are requested by "as reasonably achievable".

Table 8

This table illustrates a notable increase in the collective dose for PLNGS 2017 to 2020. No matter what the explanation provided in this CNSC staff report. No one wants to see such an increase from 2019 to 2020 period. There must be methodologies available for the licensee to prevent such an increase during maintenance work. The new licence conditions need to include an action plan to ensure such increases are not reported during these maintenance work activities.

Perhaps the worker protective equipment and respiratory protection needs to be upgraded. Perhaps the work procedures as well need to be reviewed and improved to reduce these low **chronic** doses of tritium received by workers. This writer is requesting a response to my suggestion. Are there new

protective technologies available now or in the future if so, they need to be used over the next licensing renewal period.

Radiological Hazard Control

This writer has no issues of concern with NB Power's RP program that ensures there are adequate measures in place to monitor and control radiological hazards as described in this CNSC staff report.

3.7.3.3 IIP Improvements

This section identifies improvements as included in the Periodic Safety Review #2 (PSR2) IIP that NB Power, on April 30, 2021, files with the Commission. What were the key improvements identified?

Question is why weren't these enhancement plans initiated early over the last 5 years licensing period and not submitted just a few months before this licence renewal was registered.

One of the improvement/ enhancements was the prevention of airborne tritium withing some areas of the severe building through the ALARA Five -year plan. The time frame for correction needs to be completed sooner rather than later waiting for that 5-year implementation plan. My concern is that as a service building more employees, contractors, workers could access this kind of building and be exposed to airborne tritium. This writer does understand that there are protection and precautionary measures in place for workers who perform activities in those areas. The deadline to removal of tritiated moderator water is 2028, six years from now is far too long for this removal, need to be done much earlier than 2028.

3.7.4 Conclusion

This writer is satisfied with the fact that CNSC states "NB Power continues to implement and maintain effective radiation protection program at the PLNGS that prevents dose limits exceedances in accordance with regulatory requirements".

3.9 Environmental Protection

The only one of the specific areas listed of environmental protection I would take exception to is the effluent control releases into the Bay of Fundy. The overall compliance rating over the last years is set as satisfactory. The rating of "fully satisfactory" would have been preferred. Having said that, this

writer takes notice that CNSC staff conclude that the appropriate protective measures are in place to prevent unreasonable risk to the environment and the public. Unreasonable risk still means that there is a risk but is it not an unreasonable one? Is the regulator's definition of unreasonable consistent with the public's definition. I don't think so.

This term needs to be explained and defined. I assume it is the CNSC who defines this term or the industry or both or is it a standard? With the applicant seeking a 25-year licence and CNSC recommending a 20-year licence, how do we know that the risk status will not change or the 20 to 25 years? Which methods are in place to monitor it?

This is another reason why this writer is recommending a 10-year licence renewal period. Health risk science could easily change over this long 20-year licensing period.

Radiological Releases (Page 78)

In respect to this section on page 78, for each of the release points for each of the two effluents pathways for PLNGS, (1) the ventilation stack for airborne releases and for (2)liquid releases, the discharge point of the condenser cooling water in the Bay of Fundy. It is the radionuclide releases to surface waters for 2017-2020. (Table 14 – Page 78) that is a concern to this writer.

Even though CNSC report under water monitoring – Page 81 states "Based on the information provided in the following sub-section, CNSC staff conclude that the level of waterborne radionuclide is acceptable and does not pose a risk to the environment and the public. This writer is not convinced. There is something out of normal to have radioactive water being discharged into the surrounding water areas especially the pristine Bay of Fundy – the habitat for come many sea creatures. I understand that there is an approval process prior to these releases, it is important that we understand what the science-based research reference include in the CNSC claim that such waterborne radioactive material is acceptable and does not pose a risk to the environment and the public. A lot of seafood is harvested from the surrounding waters of the Bay of Fundy. This writer is interested to see the latest science-based reference studies. They need to be listed as an appendix. The CNSC Commissioners can review this claim. These two release points are two release points – are two release points too many. There needs to be a plan developed to capture these air/water releases into a close loop recycle type of technologies to prevent such releases. For example, a large pulp and paper has an extensive water treatment system that cleans discharge water to the point that fish can live and not be killed. The

massive volume of water discharged may make such a recommendation unrealistic or just impossible? Currently that local industry is enhancing its water treatment capacity to improve it even more.

Why can't such water treatment plant be incorporated into the PLNGS operations? Perhaps it is impossible but a response to this recommendation is welcomed.

It was encouraging to read that PLNGS has developed a comprehensive strategy and implementation plan to mitigate the long-term hazards, transfer, storage and final disposal of spent resin – so why can't the same planning be directed to the waterborne radionuclides?

Monitoring Equipment

Did all the monitoring equipment work consistently where these periods of time when such equipment was off-line – not working? If so, can you please provide a time-period over the last five years where such equipment was not operating?

Protection of People (Page 83)

Based on the information provided by CNSC staff that the radiation dose received by a member of the public from radionuclide does not exceed the regulatory annual public does limit of 1 mSv / year, this writer has no issues of concern on the airborne side. Again, members of the public are not exposed to the unreasonable risk with respect to hazardous substances discharged from the nuclear power plants NPPs. This refers to the NPPs – there is only one nuclear plant under review that is PLNGS – so why include other NPPs at bottom of page 83? Is this section protection of people just referring to PLNGS or all other nuclear power plants? The second paragraph on page 84 does provide clarity with the statement.

"CNSC staff conclude that the public living in the vicinity of PLNGS were protected from the impacts of releases of radiological and non-radiological substance form the facility between 2017 and 2020. This is what is important with respect to that annual dose limit of 1 mSv/year. It would have been helpful to include other public exposure levels such as medical, dental and X-ray so that the public can put this licensee dose limit into a broader exposure perspective.

Reference to non-radiological releases. Title of Section Protection of people from hazardous substances – bottom of page 84.

It is important to note that one of the non-radiological substances is particulate matter – there is no breakdown in this report of PM 10 or PM 2.4 microns per cubic meter.

It is an established fact that with PM 2.5 this human body has not defense or protect system to prevent PM 2.5 from entering directly into the lungs and blood system. This distinction should have been made. That means airborne particulates do get ingested directly into the human lung for those exposed. I would like to have this distinction and consequent health impact clarified in this public review process so to say we are protected with this kind of particulate matter PM 2.5 may not be completely accurate. For reference , refer to New Brunswick air quality monitoring report 2019. https://www2.gnb.ca/content/gnb/en/departments/elg/environment/content/air_quality.html

Table 16 – Page 84 Estimated annual dose to a member of the public from 2017 to 2020 from PLNGS

If one were to use this Table 16 as a database to determine if there has been an increase in this 2020 annual dose, one could be easily deceived. At first glance, it appears there may have been a substantial increase from 2017 at 0.73, 2018 at 0.72 and 2020 at 1.32. Many people are not familiar with these quantitative measurements. The number 1.32 compared to those other years looks like an increase because someone may have not presented this number accurately with .00132 microsievert (uSv-a). These public review documents need to be explained in clear plain language such an example in Table 16 on page 84. More explanations need to be part of such technical measurements. Care has to be taken to ensure these oversight reports and finding are user friendly to the public.

The bottom line for this writer is that the CNSC conclusions that the public living in the vicinity of PLNGS were protected from the impacts of releases of radiological substances.

Environmental Risk Assessment (Page 85)

This writer was pleased to see an updated environment risk assessment completed and posted. Particularly happy to read that a Human Health Risk Assessment (HHRA) for radiological and non-radiological hazardous contaminants and physical stressors.

Reassuring to further read “CNSC staff agree with NB Power’s conclusion that the overall risk to the environment and human health form PLNGS is acceptably low”.

This section, however, does state “There is a potential from chemical stressors of low probability and limited extend form some aquatic and terrestrial biota, but not risk is expected from physical stressors. As part of NB Power further assessment revisions of 2020, ERA, NB Power also suggested a recommendation to record seal presence, entrapment and mortality events in the area to confirm the expectations that there is no risk from physical stressors. Those further evaluations need to be founded with factual data before conclusions are made. “Expectations” need to be founded on and with factual data.

3.9.4 Conclusion

This reviewer of this CNSC report is satisfied based on the documentation provided (ERA) and this section that NB Power continues to implement and maintain an effective environmental protection program at PLNGS. Further CNSC staff confirm that NB Power implements and maintains effective environmental protection measures to adequately protect the environment and the health of persons in accordance with regulatory requirements. This is consistent with public expectations.

3.10

This section from 3.10 to 3.11 was read carefully with this writer in agreement with the conclusion in Section 3.10.4. It is reassuring to read that conclusion – “NB Power continues to implement and maintain and effective emergency management and fire protection program at PLNGS in accordance with regulatory requirements. CNSC staff confirms that NB Power has sufficient provisions to ensure preparedness and a response capability that would mitigate the effects to accidental release of nuclear and hazardous substances on eh environment and effects on the health and safety of persons”.

Does this include only that area of the emergency planning zone 20 km around the PLNGS? Regulatory requirements are specific to that 20 km radius around the facility. Outside of that zone, it is my understanding that the Point Lepreau Emergency Response Plan designates the New Brunswick Emergency Measures Organization (NBEMO) as being for the protection of the public. I assume that the area outside the EPZ? There are 3 zones at 20 km, 30 km and a 50 km. There is need to clarify who and what is covered pin each of those zones. Further explanation of these zones would be helpful. Who does what and when in these zones is the question? It was reassuring that there was a full-scale priority nuclear emergency training exercise on October 6-7, 2021, named Synergy Challenge at PLNGS. There is reference to lesson learned – but no detailed provided.

Those lessons learned need to be identified in this report. Good as well to see the commissioning of a new Off-site Emergency Operations Center in St. George, NB. This writer attended the open house at that location and had the opportunity to speak with the EMO representatives as well as getting a tour of the off-site center. There is reference to "mutual aid partners including Saint John Fire Department; however, this section does not provide any information about what is in this agreement such as role or involvement. Considering that PLNGS is located about 40 km from a large city of 80,000 people in the city of Saint John, this public review should include a report on information or the involvement of this mutual aid partner. If there is a major event at PLNGS, SJFD has to respond - how will it impact its fire service response to the City of Saint John? At the last hearing in Saint John, the Fire Chief delivered a presentation on the subject and their role and involvement and resources as a mutual aid partner. As part of this public review of PLNGS, this writer is requesting that an update be provided on the issues raised by the Saint John Fire Chief at the last public hearing a few years ago. He raised issues and concerns. How were they handled with outcomes.

Fire Protection Program (Page 92)

Please provide an update on CNSC 's monitoring of the implementations of certain corrective actions identified in a fire protection focused Type II inspection form November 30, 2020, to January 22, 2021. Can you verify if NB Power is maintaining the fire protection program in a manner that is consistent with CNSC regulatory requirements and expectations? I would appreciate a response.

3.10.3.3 Improvements (Page 93)

Reading this section, it is clear that there is room for improvements. NB Power committed to enhance their conventional emergency preparedness and response program at PLNGS. What was there to enhance?

What were the needed improvements?

Over the last 5 years of the current licensee, if there had been a fire emergency, would the equipment and response efforts been compromised or as effective as it should have?

Waste characterization and minimization (Page 95-96)

This section states that NB Power is projecting end of operation in 2040 and continues to propose a deferred decommissioning strategy for PLNGS. It is envisioned that the entire site will be decommissioned as a single project to achieve and state suitable for release from CNSC regulatory control. This is inconsistent with the proposed plans of this licensee entering into a formal vendor agreement for these proposed small modular reactors – one vendor of which proposes to use the radioactive nuclear waste material from PLNGS.

Therefore, this statement "for release form CNSC regulatory control is worrisome. That is not the case at Gentilly facility that has been decommissioned. CNSC still has regulatory control as described in the 2020 Regulatory Oversight Report.

With expected licence application expected in 2023 or 2024, the SMR developments are expected to have a strong link and interface with PLNGS – so how can CNSC release itself from regulatory control? This above cited statement on Page 97 needs an explanation in relation to future SMR developments. The licensee has brought up reference to SMR in its licence renewal documents, so this inquiry is valid and is of interest to this writer and therefore would appreciate a response from the CNSC.

Under NB Power waste management program, the new licence conditions will need to ensure that such a management program is consistent with and in uniformity with the soon to be approved Canadian Radioactive Nuclear Waste Policy. Currently NRCan is leading the public engagement/ consultation process. Please refer to the final report on that public engagement along with the draft of this new updated policy. There is currently a 60-day period of public review. There was no mention of this revised policy that could have ramifications of NB Power's waste management program. The Commissioners will need to ensure that new licensing conditions are in sync with this soon to be approved radioactive nuclear waste policy of the Government of Canada.

3.12 Security

Cyber Security

The two sentences with 54 words of information provided in this CNSC CMD document on page 100 is inadequate for the public to learn of the current cyber security program that exists. This public have no idea of how much this is a threat. Will it be adequate to keep this nuclear facility safe from cyber

attacks and interference? The public have been alerted to this threat recently with Russia threatening cyber attacks on energy infrastructure system. Canadian systems could be a target of such attacks. Obviously, the public review process would not be privy to any cyber security program details. This writer would like to learn if NB Power, PLNGS is well protected from such cyber attacks. There are no comments on the state of preparation and protectiveness considering that the CNSC in a recent cyber security regulation review process reported at the webinar session that cyber security is the biggest threat to nuclear power plants. There is even more of a concern since the threatening comments coming out of Russia recently. There may be a need for special strengthened conditions in the next Licence Condition Handbook. I would like to hear some reassuring words form CNSC that would indicate that nuclear plants are well equipped to respond to cyber attacks. The Commissioners reviewing this application in closed session with CNSC staff and NB Power may want to be very proactive with questions on the cyber security programs especially for the future of this licence renewal period. It was encouraging to read in Section 312.3.3 proposed improvements that NB Power continues to use new technologies, security equipment and enhanced barriers to improve its security program. In light of the security threat from the trucker convoy and now Russia attacking nuclear sites two events never anticipated. It is now time to re-think and review overall threat responses. How could

NB Power handle a convoy occupation in Ottawa of trucks blocking or having up access entrance roads to this nuclear power plant? The current equipment as illustrated in one of the review documents may be inadequate. A new security threat analysis is needed as part of this licence renewal. Enhanced conditions needed to reflect emerging threats both in Canada and ahead. The new CNSC amendments to the Nuclear Security Program are most welcomed and needed. Once that is really important is for licensees to assess their vulnerability to cyber threats. This section does address some of my concerns noted above in my commentary under Security. Any new licensing conditions in this area need to have tight timelines for implementation.

3.13 Safeguards and on Proliferation

The reviewer has carefully read Section 3.13 and 3.14.4 on this important aera of any licence renewal review. This writer has no issues of concern here as there is excellent safeguards proliferation topic. The only recommendation I would make is that before CNSC finalize any condition in the renewal licence, that the Canada/International Atomic Energy Agency (IAEA) be consulted and approve any current or any new condition related to this area of non-proliferation to ensure such conditions are

consistent with their own mandates. This whole area is one of the most important considering what is going on in the government geo-political front.

4.0 Consultation and Engagement

In this area, the writer provided commentary on this subject area under PART A of my submission above under CMD-2-H1 – NB Power's application section. The issues noted were the impact of the recent indigenous community court case on the issue of land claim/ownership of some links in New Brunswick including the land in which Point Lepreau is located. Reading this section (4.1 to 4.1.2) on Indigenous Consultation and Engagement, it appears that CNSC is making strong efforts in this area. It is noted that in paragraph 2, section 4, where it is stated that "CNSC staff discuss regulatory matter with local community on a quarterly basis and with each of the 3 indigenous nations on a semi-annual basis" " The next paragraph refers to the First Nations in the consultation and engagement process. For clarity what is the difference between Indigenous Nations and First Nations in context to duty to consult.

Section 4.1 under Indigenous Consultation and Engagement describes the extensive efforts to reach out and engage especially in this licensing renewal process. This writer has been impressed over the year with PLNGS's commitment in this area as described in
Section 4. Reading this section, these efforts and engagement activities are even more extensive than this writer realized. The Manager of Community Affairs and Nuclear Regulatory Protocol needs to be recognized as being a key player over the years in this whole area of indigenous consultation and engagement. Developing relationship sand listening are noteworthy. These activities are described in Section 4.1.1 and demonstrated on page 109, 110 on the subject of NB Power Engagement. Some concrete examples where NB Power works with Indigenous Nations and communities, member of the public in their host communities and other communities at large. Some of these activities include, regular community liaison committee meetings, open houses, newsletter, website updates, regular engagement with surrounding fishing communities. This writer, as a community member has been very pleased with the commitments of NB Power with their public engagement efforts. This writer could not think of any additional efforts in this area. What is described in the Section 4 is impressive form this community members review of this Section.

SECTION C

Comments on the Draft Licence Condition Handbook

As part of the NB Power License Renewal public reviewed the Canadian Nuclear Safety Commission, this community member carefully read the draft licence application for the nuclear power plant.

Upon careful review of this Draft License Condition Handbook, this writer identified a number of issues of concern with subsequent recommendations offered.

This intervenor carefully reviewed each of the 16 licence conditions that are identified within a marked off boundary at the top of the draft licence underneath additional information, titled Preamble, Licensed Activities, Compliance Verification Criteria, and Guidance. If all the 16 conditions were to be include, it would cover approximately 2-3 pages if that's all one needed to learn what are the actual license conditions; however, the License Condition Handbook has 164 pages that cover more that the actual 16 conditions. Along with the information covering the above referenced topics. For example, License Condition 1.1 is as follow:

“The Licence shall implement and maintain a management system”.

Below that condition, there are four and a half pages covering the topics above. This writer acknowledges and quite frankly, was very impressed with that additional information in the License Condition Handbook which purpose is to identify and clarify the relevant parts of the licensing basis for each license condition. The information provided in this Handbook provides a comprehensive description of the regulatory requirements set out in the applicable laws and regulations. In addition to safety and control measures described in the facilities’ or activities’ licence and the document directly referred in that licence as well as safety and control measures described in the license application and documents needed to support that license application.

All to be expected and needed but in G .1 license condition (i), (ii), (iii), actually one of the conditions identified in the handbook in the section – General, then are six conditions. I assume G1 to G6 conditions have the same legally bound conditions just as the 16 ones covered in the Handbook.

My issue of concern is related to how general and open ended are the 16 conditions.

For example, Licence Condition 2.1 “The licensee shall implement and maintain a human performance program”. Yes, the preambles are guidance information that fills in the many blanks and regulatory backdrop but

guidance information such as in 2.1 has discretionary compliance language with the “management system should be used to promote and support a healthy safety culture’.

Another example of a short open-ended general condition is **4.1. Conduct of Licensed Activity**

“The licensee shall implement and maintain a safety analysis program”.

The other critically important regulatory information for that condition is well identified in the preamble, compliance verification criteria section. In many other conditions, guidance, such as in 5.1.

Preamble and guidance information does not appear to be as legally binding as the actual wording in the condition itself. This needs clarification. Do these associated sections have the same legally binding states as the actual 16 contractors?

Obviously, all the conditions are based on legislation, regulatory foundations. But some, such as CSA, Canadian Standards Council, Code of conduct and Building Codes are generally not legally binding.

What this writer would like is to see within all the 16 additional conditions are additional words compliant with, then list the legislation regulatory documents attached to that condition. All the relevant regulatory documents are identified in the information on each condition.

The question is whether the 16 conditions that are in place are in just too simplistic with generalized language when read by themselves.

The conditions need to be worded to provide the public with the assurance and reference to all the nuclear regulatory legally binding foundations. There are requirements to follow standards, codes of practice etc. Are these as legally binding as the actual legislative mandated regulations?

I have reviewed various licence conditions for large industrial complexes, the 16 conditions for PLNGS as identified with lines are too general and simplistic and lack identifiable regulatory references in the actual wording of the condition. Yes, the details are under each condition but to what degree is that information as legally binding if ever challenged in a court or other future legal proceeding. If challenged, the licensee could work its way out of accountability. For example, 12.1 “The licensee shall implement and maintain a security program”. That is too general without an add on such as in compliance with REGDOC 2.12.1 and other regulatory requirements. All of those regulatory requirement documents should be added on to the end of each of the 16 conditions.

Additional commentary on DRAFT LICENCE CONDITION HANDBOOK LCH – PR – 22 001 2042-R001

As noted, one line of introduction and the general purpose of the Licence Condition Handbook (LCH) is to identify and clarify the relevant parts of the licensing basis for each licence condition.

The actual licence conditions are the ones that are in the LCH. They are marked with a black line around each of the 16 conditions and found as well in the current and draft licensee. This writer concludes that those 16 licence conditions constitute the actual legally binding license conditions not the 164 pages of critically important information found in the LCH.

This writer concludes that all the other information included in the Licence Condition Handbook is not the licence conditions. It is understood that this LCH describes the licensing basis for the facility. Further, the licensing basis is a key factor to establish compliance verification activities for PLNGS in accordance with CNSC Power Reactor Regulatory Program Compliance Verification Strategy eDOC 5115523.

As noted above, the three parts in the Licence Condition Handbook, preamble compliance verification criteria, guidance are not the actual licence for PLNGS. Only those 16 licence conditions marked off in the black border in the LCH are the actual legally binding conditions.

The foundation or basis for all theses conditions are found in the appendix list of CNSC Regulatory Documents P.148-150 identified as per link to each condition. The other appendix as found on 144 to 164 identify all the other regulatory requirements that cover the specific condition. As recommended above, this writer would like to see those regulatory references in the appendix be written at the end of each licence condition with the words as in the compliance to the following regulatory documents, put them into the actual licence condition. It is my understanding that this used to be done years ago. For some reasons, this practice was changed – the question is why?

Could you provide an explanation? If this entire 164-page Licence Conditions Handbook is considered to the PLNGS's actual licence, then I would recommend this be made very clear right at the top of the page in this introduction to avoid any public confusion of what is in fact this declaration.

It is suggested that this declaration be worded as follow:

This entire Licence Condition Handbook constitutes and is in fact the complete licence for Point Lepreau and needs to be read in its entirety.

This will avoid any public misunderstanding of what the licence conditions are. If my interpretation is correct, then CNSC needs to clearly state the actual and only licence conditions are the ones that are marked off by black border as presented in the LCH. Such clarifications will make it easier to learn what are the actual licence conditions from other regulatory information basis information for those conditions.

Reference to Safety Culture P. 23

A safety culture self-assessment methodology is developed following a continuous improvement process which is governed by SI-01365-A62. This writer did not see the results of the safety self assessment in the applicant's application or referenced in CNSC document. This writer may have missed it. Could it please be made available as part of the Part II Hearing Process.

Management of Contractors

This is a key area of concern. There are a number of review topics and requirements listed and CAN N286-12. The list needs to be expanded to include one on training and oversight of contractors. Most of the list covers non-personnel focus such as planning for replacement parts storage and handling. The "supplier's customer relationships" need to be expanded - not specific enough. NB Power Senior Management to continue to foster a healthy safety culture. I would like to see the additional words "including all contractors and their employees" referenced to organizational processes and its role in maintaining and improving safety performance. I would submit more than organizational process should be included here

To CNSC, please clarify to avoid any public misunderstanding or confusion.

In my view, Licence Condition 2.1 is one of the most important ones based on my 30 years as practicing registered social worker. I concur on page 27 "it is important that the licensee continuously monitors human performance, takes steps to identify human performance weaknesses to improve human performance". I could not agree more.

Control Room Staff Page 32/164

The minimum shift complements on page 32, seems light in numbers especially for main control room. What is such certified staff got sick or unable to work for various reasons? Are the back ups qualified by certifications designated to take over? Clarification would be helpful in this area. In reviewing this area in the Regulatory Oversight Report, this writer has concerns whether there are enough certified staff available.

Personnel Training P. 35

What about contractors being added here - not just a training program for workers. This writer is of the view that they should be included in this section.

Compliance Verification Criteria P. 39

Regarding multiple choice question format – I understand an audit has been complete by CNSC to determine the effectiveness and quality of results from such use. It would be most helpful to have the results made available to the Commissioners to determine if they are satisfied with such a testing format being used.

Licence Condition 3.2 – Approved to restart after a Serious Process Failure

It states, "The licensee shall not restart a reactor after a serious process failure without the prior written approval of the Commission, or the prior written consent of a person authorized by the Commission". This writer believes this condition is not strong enough in respect to public oversight. There needs to be a hearing process that includes public notice opportunity for public to review a report from CNSC staff and at least a one-day hearing convenience by the Commission where the Commissioners can review, ask questions and make recommendations. Considering the information in the preamble of Licence Condition 3.2, this writer recognizes the potential of a serious process failure as defined would be justification for such a recommendation.

3.3 Reporting Requirements Page 54

Event Report and Notifications

This writer could not locate a table or concise record of non compliances. Such a record by year needs to be readily available so the public can see how the licensee is doing in the area of non-compliance. This record would be for applicable law at the federal, provincial or municipal level. A table record needs to be included in the regulatory oversight report annually.

This tabulated concise record could be added as an appendix in the ROR. Thought they may be of low safety significance; the public should be able to readily see the non-compliance records in a summary report document.

4.1 Safety Analysis Program

These are a number of safety analysis listed. This writer would have liked to see them included in the key Commission Members Documents (CMDs) that were posted prior to Part 1 public hearing in January 2022. It is understood they are posted on CNSC website, but they required much more prominence and attention as part of the upcoming Part II Public Hearing. Those assessment are in the public interest and should be an important part of public hearing proceeding for this licence renewal. It is understood that some of the information is restricted and not available to the public. Which part of the report fall into that classification? Please provide reason for that confidentiality or exclusion from the public.

Periodic Inspection and Testing Section Page 85-87
Document – 0087-01322-3008-001-SR-A-00

In reference to this document mentioned above, "the licensee shall provide an assessment to demonstrate continued fitness for service of the pressure tubes". This writer would like to see the results of these assessments be given prominence and attention for the public as part of the public hearing process. The results are covered within CNSC Report CMD H-2.

But not everyone in the public would be assessing that staff report. This writer has no reason to be concerned considering pressure tube were all replaced during the 2005 refurbishment. That was 17 years ago in the CNSC or applicant's public releases – may I suggest a public update to reassure the public of this critically important potential safety area.

Nuclear Substance Derived Release Limits (DRLs)

In reading this section on page 102 of LHC on this subject, this writer was struck by the high number of DRLs listed in that table on page 102-103.

58 although such releases are at a safe level, the fact that they are either airborne or discharged into the water, it is always a concern especially when the general public do not know anything about those substance and their impact especially the accumulated impacts despite the conclusion by the CNSC that these airborne emissions are safe. Over the next 25 years, the applicants requested licence renewal period, what assurance does the public have that what are safe levels today may not be safe in the next 20 to 25 years?

This is another reason this writer is recommending a 10-year licence renewal period. Science and evidence-based health research changes over the years.

Environmental Actions Levels

This writer would like to see the timeline deadlines periods tightened up. I have made note in my other written submissions that CNSC is too tolerant of the licensee's completion dates in meeting various REGDOC requirements. Words like to be implemented as set out in REGDOC would give the licensee the message that the public expects compliance for action items as set out in the various regulations. A good example of my point is compliance of REGDOC on random alcohol drug testing That REGDOC was issued several years ago but full compliance by the applicant will not be started fully until 2022.

Thermal Effluent Plume Monitoring

Despite the statements that this massive volume of heated water is safe to aquatic life in the surrounding Bay of Fundy, this writer is still not comfortable with this practice from an environmental impact perspective.

This part of condition 9.1 Environmental Protection Program needs to not just be monitored but monitored in a more robust manner?

The whole practice needs to be tightened up during the new licencing renewal period. The status quo in this area is not consistent with public expectations.

Licence Condition 10

This one as written "The licensee shall implement and maintain an emergency preparedness program" is too general. There is a need to be more specific. Yes, details are in the regulatory documents but many of the licence conditions just seem to be so general considering the complexity of this facility and the regulatory framework that provides oversight. In this licence condition under Guidance, Page 109, References to CSA N1600 are used as guidance regarding off-site provisions.

"Further, the licensee should provide emergency communication outlining what surrounding community residents need to know and do before, during and after a nuclear emergency". Too much discretionary non legally binding language for my liking for a licence condition of nuclear power plant. Change "should" be "shall". Another example is Licence Condition 11.1 (see Guidance on page 114) with word should used.

This writer acknowledges that PLNGS is in compliance with the public education piece as they have an emergency guide distributed to their surrounding communities in addition to the posting on their website.

Condition 15.3
The license shall implement and maintain a fire protection program for the SRWMF. The preamble in the LCH cites two codes. The National Building Code and the National Fire Code of Canada. The question is are these codes legally binding. Would the licensee be legally liable if for some reason it did not fully comply to these codes?

Part is the REGDOCs are legally binding and very strong. Are these various codes and standards in the same league as regulatory law and regulations?

This area of any distinctions between regulations, codes standards need clarification in context of the license renewal for PLNGS.

This completes PART C of my submission.

SECTION D Summary

Summary of Commentary on issues and areas of concern on NB Power's Licence renewal application of the PLNGS and related documents specifically NB Power and CNSC Commission Member Documents.

NB Power licensing renewal for the Point Lepreau Nuclear Generating Station

Public Review Engagement Process

This writer carefully reviewed those key documents in addition to the draft licensee conditions handbook. As part of this review and preparation for the submission, the writer took full advantage of the public notifications both in the hard copy notices sent out in the federal mail to all households in our communities as well as CNSC and NB Powe online notification. Additionally, this writer reached out to the licensee seeking information and meetings with PLNGS subject matter experts. AS well as all requests for information were promptly responded from their Manager of Community Relations and Nuclear Regulatory Protocol. This writer was provided binders of various subject matter of special interest. Additionally, this writer attended both webinars form CNSC on their public review process (how to participate). This writer also attended the NB Power webinar session on station operation and license renewal.

This writer concluded that from his experience, there was sufficient notice of the CNSC Public Review Process including how to participate. For the public wishing to participate like this writer, ample time and opportunities were available to see and request documentation. The licence responded well to information requests, set up several information sessions with PLNGS subject matter experts which were very helpful to this community member effort to understand a complex nuclear generation facility as it pertains to safety issues.

In conclusion, there was ample public notice and every opportunity to receive information needed to be informed of both the public review proceedings/process as well as the related documentation as part of this licensing renewal process. All one had to do is to take the initiative and take advantage of this opportunity to get engaged in this public review process.

Length of licence renewal based on my above analysis and review of both NB Power's request for a 25-year term and CNSC's recommendation for a 20-year term, this writer concludes that the case has not been made strong enough for justify the 25 or 20 year term. Just because the industry trend is for longer licensing and renewal periods, worldwide, it is not justification for such long licensing periods. What is compelling is the argument for shorter periods of 10 years when the CNSC – the Federal regulatory has provisions for robust thorough public reviews as currently in process now. The argument that the annual Oversight Regulatory Reports on all Canadian nuclear plants has covered Point Lepreau with 37-page section is just a high-level view, it is not detailed enough in spite of the public hearings held to cover all those nuclear plants. There is only a handful of public participants that even excludes some community member from making an oral presentation. Sorry, not satisfactory oversight process compared to the full public review process currently in place for a licence renewal withing this submission this intervenor has reviewed the key public review Commission Member Documents (CMDs) with commentary on issues and areas of concern in relation to the licence renewal. In summarizing these comments, this writer will highlight some of the key ones. Please refer to my full commentary above that covers them all including recommendations to CNSC associated with these issues.

In respect to the safe operations of Point Lepreau Nuclear Generating Station, this writer based on a careful review of the licensing renewal documents along with the annual oversight reports concludes without question that this nuclear power plant is operated at a very safe level. This writer believes this site is safe. It is based on the fact that it has a strong safety culture and day-to-day operational practice to ensure it stays that way. The regulatory oversight with the exhaustive regulations monitoring and oversight of the CNSC provides that robust regulatory foundation that provides this licensee with the direction and rules that underline how such a site will be safely operated. It is all about safety. This writer has confidence in the federal regulatory and the licensee to continue to operate this nuclear power plant into a 10-year licensing period at which time another robust licensing renewal public review will take place.

With that being stated, this intervenor has identified in this submission some issues of concern with recommendations that will enhance an already excellent safety record. Those comments are made in the public interest to provide that additional public oversight to ensure the continuing safe operation of the PLNGS cover the next licensing period.

COVID-19 Impact

On March 20, 2021, 2022, New Brunswick lifted all mandates and restrictions on COVID-19 despite this pandemic is not over according to the WHO. During that last week, there has been 16 deaths, 116 people in the hospital and thousands of new cases identified. My concern as a society is relaxing past practices to control and manage this disease that will place employees at Point Lepreau more at risk these impacting staff availability to carry out their safety mandated work. The licensee cannot let its guard down must continue its current robust COVID emergency plans that has protected both staff and the facility form the worse impacts of this pandemic. It is recommended that in a new time sensitive condition be added to the renewal licence to ensure the protective robust measures continue.

The review document does identify non-compliances to the regulations but are considered to be of low safety significance. These are noted throughout the CMD review document for CNSC including the Regulatory Oversight Report for PLNGS. There needs to be a mater summary list compiled in a progress report appendix format to allow the public to see the licensee compliance record. As well an enforcement action list along with corrective actions with timeline requirements needs to be complex and included in the annual Regulatory Oversight Report for PLNGS. A summary report card if you will. Certification training testing and success rates of employee required for the critically important certified position to ensure safe operation, is another issue identified. As noted in my main commentary section above, this issue of having sufficient certified employee available both short and long term is potentially problematic if not carefully investigated and addressed. A new licence condition needs to be enhanced or added that addresses why the failure rate of those employee seeking to be certified has been higher than one would like to see.

The area of ageing / obsolesce management is another major area of concern especially as PLNGS moves forward over what may be a much longer licensing renewed period with CNSC recommending 20 years. Yes, there is a robust Aging Management oversight action program in base but despite best efforts aging processes do occur – parts become obsolescent with a plant 40 years old and will be a lot olde in the next 20 years, especially at end of life of this nuclear power plant.

In respect to the format of the Licence document for this nuclear power plant, this intervenor is recommending that the actual licence conditions include the regulatory references either withing the individual licence condition or in a separate dedicated appendix list to allow the public to be able to

quickly reference what are the regulatory legally binding foundation for each of the conditions. The Licence Conditions Handbook (LCH-PR provides such reference within this handbook under various topics including preambles compliance verification, guidance information all of which is very comprehensive and relevant to the actual licence condition. Another key issue of concern for this intervenor centers on one of the key safety areas Human Performance, specifically Fitness for Duty. The Human Performance Program defines how PLNG plans, implements and detects and corrects human performance behavior supported by Leadership and employee behaviour that helps prevent human error related event.

With a 30 year plus history as a social worker, this intervenor is very much aware of the human condition with all the stress psychosocial issues and social problem the public faces as they live their lives. As such, their capacity to function as optimum levels, can be adversely impacted at home and in the workplace as they cope with a variety social problem area. It is well understood by Canadians that there is an increase in mental health issues that people are dealing with. Employees working at the Station are not exempt from these ever increasing social psychosocial issues and problems. Although the licensee with the CNSC regulations manage such issues within the human performance program, the human condition, social problems and mental health issue impacts could take a toll on everyone. Therefore, the new licensing conditions need to reinforce and strengthened the current regulatory oversight as well as the licensee program in these ever-increasing important areas.

Security

In light of the recent security threat in Canada, with the latest 3-week truck convoy in Ottawa, along with the current Ukraine threats to their nuclear plant. This area of security protection will need to be reassessed to ensure that the current security protection is adequate in light of the two unexpected security threats.