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Oral presentation

Written submission from Martin Flood

Exposé oral

Mémoire de Martin Flood

In the Matter of the

À l'égard des

Canadian Nuclear Laboratories (CNL)

Laboratoires Nucléaires Canadiens (LNC)

Application from the CNL to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility

Demande des LNC visant à modifier le permis du site des Laboratoires de Chalk River pour autoriser la construction d'une installation de gestion des déchets près de la surface

Commission Public Hearing
Part 2

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FINAL

APRIL 8, 2022

Written Submission from Martin Flood

To

Canadian Nuclear Safety Commission

On

Canadian Nuclear Laboratories application to amend its Chalk River Laboratories Site License to authorize the construction of a near surface disposal facility

INTRODUCTION and RECOMMENDATION

The point of my submission is to urge the Canadian Nuclear Safety Commission to **recommend that the Near Surface Disposal Facility be moved well away from the Ottawa River.**

My name is Martin Flood. I am a retired federal public servant with an ongoing interest in the proposed NSDF at Chalk River. I am as well, a property owner at Fort William in the municipality of Sheenboro, Quebec which is immediately downriver from the proposed site of the NSDF.

I have participated in the public information sessions given initially by the proponent and the CNSC. Over the past number of years, I have followed a great deal of the information available through various public forums. I have gone door to door in our local community of Sheenboro with a petition opposing the NSDF proposal. Over 200 individuals signed the petition which was presented to our local council and sent to our local MP. Only seven people declined to sign the petition. Most recently I followed the hearings conducted by the Standing Committee on Environment and Sustainable Development on Nuclear Waste Governance in Canada.

I have concluded that the proposal put forward by the proponent is deeply flawed.
I also have little confidence that the proponent can build this facility to safely protect people and the environment**. I therefore urge you, the Commissioners, to recommend that the proposed site for the NSDF be moved well away from the Ottawa River.**

It is not my intention, nor am I qualified, to debate the scientific rationale that has been put forward by the proponents in their Environmental Assessment Report. Nor am I qualified to question the scientific examination of the project by the dedicated staff of the Canadian Nuclear Safety Commission (CNSC). I urge you to look beyond the science and to consider that the project will be carried out by a group of humans over close to a hundred-year period under the umbrella of the Canadian National Energy Alliance (CNEA). Do you have a high degree of confidence that this group has the competence and integrity to do the job?

I am presenting my rationale for my recommendation under four headings:

- Flawed Business Model
- Competency of the Proponent
- Trust in the Proponent
- Unknown Risks

FLAWED BUSINESS MODEL

The Federal Government gave a consortium of engineering companies the task of dealing with Canada's nuclear legacy waste. This consortium is called the Canadian National Energy Alliance (CNEA). Their work is being carried out by their subsidiary Canadian Nuclear Laboratories (CNL). It is being overseen by the Atomic Energy of Canada Ltd (AECL) on behalf of the Federal Government under a business model known as Government Owned Company Operated (GoCo).

The GoCo model is a version of a current model widely used in the design, construction, and subsequent operation of many projects. It is extremely important that the owner, in this case the federal government, have iron clad criteria at every stage. Neither the federal government nor its crown corporation AECL have demonstrated that it has the inhouse expertise to identify and monitor the criteria needed in the execution of this project.

I recognize that it is not the place of CNSC to make, change, or modify the government business model. Part of the role of CNSC is, however, to make a judgement as to whether the NSDF project carried out under this structure is likely to safeguard people and the environment. Several examples in the process up to this point raise red flags.

To begin with, the Federal Government locked itself into a GoCo model before putting in place the full expertise to create and manage such a business model. The Auditor General in its Special Examination in 2017 of AECL sited the following:

- As of January 2017, instead of a full complement on the Board of Directors, there were only four members of the Corporation's Board, all holding office on an interim basis.
- At a time when the 5- and 10-year strategic plans were being developed, no President or CEO was in place.
- The Board had not yet implemented a formal systematic process for monitoring and reporting on risks identified in the corporate risk register.
- The reporting framework in the Corporate Plan did not demonstrate how the Corporation would measure the overall objective of restructuring.
- Except for the lead Contracting Officer, the Corporation's contracting team had limited experience working with the GoCo model.

This begs the critical question: Did these shortfalls in critical staff result in poor decisions in letting the contract to CNEA?

The original contract between the government and CNEA has not been made public. One aspect that has been revealed is extremely troubling. The engineering companies that make up the CNEA consortium have changed more than once in its short history. In a project of the complexity of the NSDF, the government owner would surely have made a hiring decision based on the expertise, track record, and integrity of the members in the consortium. Most certainly the expertise of each member would have been critical. Why then has it been necessary to

change consortium membership? This calls into question the capability of AECL to make these kinds of decisions.

The choice of the site for the NSDF on the 10,000-acre AECL property is a major error. The 35-acre site within one kilometer of the Ottawa River was chosen by the proponent. Their stated rationale does not stand up to scrutiny.

- There are 10,000 acres to choose from on the AECL property plus an additional 60,000 acres of federal lands immediately adjacent at Garrison Petawawa and the forestry research station.
- The proposed site is not in compliance with the International Atomic Energy Agency (IAEA) criteria with respect to placement of nuclear waste near water.
- The proposed site is on a ridge sloping away from the river. This is deemed as a positive by the proponent despite the accepted fact that water will eventually drain back into the river.
- The proponent states that the proposed site would negate having to use public roads to transport waste to the NSDF mound site. If a site is chosen well away from the river on the abutting federal lands, there would be no travel over public roads.
- The proposed site is close to the current location of the majority of the waste. This appears to be the major consideration for the proposed site. Sadly, the proponent has chosen convenience over safety considerations for the Ottawa River, a source of drinking water for millions of Canadians.

This begs another critical question: What role did AECL, as owner, play in setting critical criteria for choosing a site for the NSDF?

The terms of the contract between the government of Canada and the Canadian National Energy Alliance (CNEA) have not been made public. AECL refuses to disclose the fees being paid to CNEA. The first allegiance of the private sector is to its own bottom line and its shareholders. In this case, there is no accountability through the Public Accounts of Canada. In addition, we do not know what authority AECL may have bargained away in the contract. We do know that the proponent assumes no liability should things go wrong. This is a recipe for disaster when it comes to an owner trying to hold a contractor responsible for pledges of deliverables.

Despite all the laws, rules, and regulations governing the safe disposal of radioactive and toxic waste, this consortium is left with too much power under the present business model. Another case in point. It has unilaterally decided to move massive quantities of nuclear waste from other locations in Canada to the Chalk River site. A large quantity of this waste, by their own admission, is not suitable for the NSDF. Where was AECL in allowing this to happen? There was no consultation with the public at large and certainly not with the local communities in Ontario or Quebec. **This is an outrageous use of power by a private entity controlled by foreign companies.**

There was no consultation with the public at large on the NSDF proposal. Why is this project different from the DGR proposal where communities are party to an "informed and willing consent" process? Why is this NSDF proposal different from a proposal to deposit the world's nuclear waste in Newfoundland and Labrador? In this instance, the politicians – without hesitation – said NO.

There was no consultation with the public regarding the transportation of massive amounts of nuclear waste from other locations in Canada to Chalk River. This took place despite resolutions from more than 140 municipal councils on both sides of the Ottawa River condemning this action.

The Go Co business model has resulted in a design proposal for a deeply flawed project. The owner, the federal government, is clearly not in charge. The proponent, controlled by two non-Canadian, multinational engineering companies, is making major decisions without adequate control from AECL. If nothing changes, the construction stage will be a disaster waiting to happen to say nothing of the potential for substantive cost overruns to be passed on to the public.

In conclusion it is imperative to bring some mitigation of risk to prevent contamination of the Ottawa River. This must include moving the NSDF well away from the river.

COMPETENCE of the PROPONENT

The proponent's process in preparing the Environmental Assessment report did not reflect the expertise it claims to have. The proponent's original EA submission to CNSC was returned for additional work. This was repeated multiple times. The proponent had the same information as to the requirements which the CNSC had in its possession. Why did the proponent not address all the requirements in the first instance? Either they did not possess the required expertise – or more seriously – they chose to cut corners. Either way, it calls into question their ability and or willingness to construct the NSDF in such a way that the safety of people and the environment will be assured.

The proponent's track record in delivering what it has been contracted to do is less than reassuring. It took years to come to an agreement between the citizens of Port Hope and the federal government on disposing of the nuclear waste in that community. Long before that project is anywhere near complete, this same company, CNEA, has applied for major changes. Is this a group that is a world class expert and knows what it is doing?

The lead member of the proponent, SNC Lavalin, was contracted to construct the Light Rail Transit (LRT) in Ottawa. This project was not delivered on time; its eventual operation continues to be fraught with breakdowns. During construction, the city engineers sited hundreds of

instances of non-conformance with the work. For example, the tunnel under the Rideau Canal leaked. There are many successful under water tunnel projects all over the world. What does this say about this proponent's ability to build a tunnel a few hundred feet beneath the Rideau Canal?

Two members of the CNEA consortium (Jacobs Engineering and Fluor) have a very troubling history of not complying with employee safety standards.

All these examples and more demonstrate either a lack of competence or, more troubling, a culture of cutting corners.

The proponent has not demonstrated the test of competence.

Transpose this scenario to a simple analogy of contracting a company to build a house for your family. A contractor is hired, but before it begins work, you find it has changed the composition of its sub-contractors. You do some further research about work it has done in another town. It turns out the contractor has a record of not finishing projects on time. You check how many times the city building inspector has found non-compliance with the building codes and there are several. You check with the local trade union association, and find that the contractor has been cited for issues around the safety of its workers. What would you do? The prudent owner would find a new contractor.

In conclusion it is imperative to take some action that will mitigate the very real possibility that there will be serious problems during the construction phase. Move the NSDF well away from the river.

TRUST in the PROPONENT

The proponent consistently describes its proposal as using proven technology, following international best practices, and using state of the art methodology. These statements are clearly misleading.

With respect to proven technology, what credibility is there in the following statement about the geomembrane? The proponent says it will endure for 550 years. This is from "lab testing." The proponent claims that the geomembrane has been used in some variation in other "similar locations." To describe the projects in other locations listed in the EA as similar is misleading. They are substantially different.

To say that something is proven technology after a few short years is misleading in the extreme, especially when the geomembrane is advertised as lasting for hundreds of years.

To describe a project as using "state of the art methodology" and "international best practices" says nothing about whether the technology is sound. It only describes what the nuclear waste industry has produced in its very short history.

At the international level, the lead company in the consortium, SNC Lavalin, was charged with illegal activities. Instead of accepting the internationally approved consequences, it pressured our Canadian government to give them a free pass. When our Justice Minister refused to go along with this, she was forced to resign.

According to the "Violation Tracker" data base, both Jacobs Engineering and Fluor and their subsidiaries have paid millions of dollars to settle violations of government statutes and rules in their work in the United States. These include government contracting related offenses, environment related offenses, employment related offenses, safety related offenses, and more. **What we see here are three companies of the CNEA consortium who do not feel that have to play by the rules.**

On the Canadian scene, SNC Lavalin admitted to an illegal scheme to circumvent our election funding rules.

The proponent claims it follows international guidelines as stated by the International Atomic Energy Agency (IAEA). **If this is the case, why is it proposing to decommission the Nuclear Power Demonstration Reactor at Rolphton Ontario and the Whiteshell nuclear facility in Manitoba by an in-situ process?** This process is not sanctioned by the IAEA for decommissioning facilities of this nature. In the case of Rolphton, the process entails leaving the main reactor components inside the underground foundation and covering them over with grout and cement. Given the geography and seismic activity of the area, there will inevitably be leaching into the river.

The consortium says it will monitor the NSDF for 300 years. This is a meaningless claim, designed to make the public feel good. **Who can predict what a group of humans will do or not do, over the next 300 years? The members of this consortium could not stay intact for even five years.**

During information sessions with the public, there were incidents where the proponent was faced with tough and legitimate questions. When they did not know the answer, they responded with platitudes and contempt.

<u>Two examples are:</u>

Question – Are you concerned about the relationship between nuclear radiation and the high incidence of cancer in the upper Ottawa Valley? The short and contemptuous answer was: "Everybody knows cancer is a matter of lifestyle."

Another question – Were there other sites considered for the NSDF on the 10,000-acre AECL site? The extremely brief answer delivered in a dismissive tone was: "The property has been studied to death."

Why are issues of trust germane and important in the design and location of a radioactive and toxic materials disposal site? The critical reason is that trust creates confidence. Confidence

that a contractor knows what to do, will do what it says it is going to do, and will do it right the first time; and that the contractor will do all of this without a third party constantly "looking over its shoulder." **Sadly, much of this confidence building has not happened with the proponent up to this point.**

In conclusion, the crucial question we must ask ourselves is this:

Is this consortium a group of companies we want to put our trust in to protect our safety and the future vitality of the Ottawa River? There is no way of knowing for sure, but the track record is cause for grave concern.

We must mitigate the risk by moving the NSDF well away from the river.

UNKNOWN RISKS

Both the proponent and CNSC have presented and concentrated on the science on which the proposal is based. Science, as we know, evolves. Many critical elements of current decisions are based on assumptions we accept as valid today. These assumptions may change over time. For example, did the engineers who designed and built the dikes and dams years ago in the Fraser River Valley of BC know, and or be able to predict, the extreme weather that recently caused havoc?

In this part of the Ottawa Valley, we have several dams upriver from Chalk River. In addition, to the unpredictability and severity of extreme weather in the future, there is the question of aging infrastructure. The life cycle of these dams is not forever. Will governments in the future spend the money to keep them current? Would they currently withstand catastrophic earthquakes or deluge of rain?

There is always risk associated with human error. Despite all precautions, unforeseen and life-threatening incidents will inevitably occur. Historical examples include the 1952 and 1958 accidents at Chalk River, Chernobyl in Russia, Three Mile Island in the USA, and Fukushima in Japan. Add to these occurrences the added threats of terrorism and war. These may sound remote; however, we need only ask the people of New York City and the Ukraine.

CONCLUSION

Would a different group of individuals do a better job? That is not something we can predict.

What we CAN do is lower the risk factors by exercising our common sense and moving the NSDF well away from the river. It defies logic to suggest that the proposed site of approximately 35 acres is the only and best site.

THE NSDF MUST BE MOVED AS FAR AS POSSIBLE FROM THE RIVER.

Martin Flood , MBA