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Safety Commission

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sûreté nucléaire

Public meeting

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York Halls
Holiday Inn Toronto Yorkdale
3450 Dufferin Street
Toronto, Ontario

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3450, rue Dufferin
Toronto (Ontario)

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Dr. Michael Binder
Dr. Moyra McDill
Mr. Dan Tolgyesi
Ms. Rumina Velshi
Dr. Sandy McEwan
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Toronto, Ontario / Toronto (Ontario)

--- Upon resuming on Wednesday, December 11, 2013
at 8:33 a.m. / L'audience reprend le mercredi
11 décembre 2013 à 8 h 33

THE PRESIDENT: Okay. Good morning, everybody. Here we are. We are continuing with our presentations and I would like to jump right into it. We have a full day ahead of us.

So I would like to move to the next submission, which is an oral presentation from Ms Janet McNeill, as outlined in CMD 13-M51.46.

The floor is yours.

13-M51.46

Oral presentation by Janet McNeill

MS McNEILL: I'm not very good with mics, so I -- okay, it sounds fine, I think.

Good morning, CNSC staff and tribunal members, GE personnel, fellow intervenors, members of the public and those watching via webcast.

My name is Janet McNeill and I'm a resident of Toronto. I live downwind of GE and upwind of Pickering but we know now we all live downstream of

one thing or another.

I want to acknowledge that we're here on the territory of Indigenous people, Indigenous people who are almost certainly not fans of this industry that has brought us to this place at this time.

I've been attending CNSC hearings on and off since 2006 and have been intervening at them for the past three years. I believe this is the eighth hearing I've presented at -- they still make me nervous but here I am -- the most recent one before this being the Joint Review Panel in Kincardine on the proposal to build a deep underground dump for nuclear waste right beside Lake Huron. We all know that saying about insanity and doing the same thing over and over.

I'm not going to lie to you. Working on nuclear issues sometimes makes me feel sick, disgusted, discouraged, despairing even. It's brutal and can feel soul-destroying, which is why I suppose so many people avoid becoming involved.

Just for the record, I never made a cent doing anti-nuclear work. I'm a volunteer and I work on a very low income -- the proverbial poor but happy with a pretty clear conscience. I do this work by choice, although, as I've said, it sometimes wears

me out, hearings especially.

On the upside there are occasional victories and in doing this work I've met the very finest, most intelligent, feisty, integrity-filled people a person could ever hope to meet -- my anti-nuclear activist colleagues, I mean. So I guess I can thank the nuclear industry for that.

I want to sort of apologize off the top if my presentation winds up sounding rude or angry. I was raised to be a very polite person, a very good girl, but it seems to be in my job description to be a truth-teller. A person has to do what she has to do.

I'm going to list five major things I've learned doing this work. There's a great deal more I've learned, for example, about nuclear jargon and pseudoscience and emission limits that are ridiculously high and so on, but time does not permit me to summarize all my hard-won lessons.

Number 1. Uranium should be left in the ground. Human beings should never have messed with it and while we all know we can't put the nuclear genie back in the bottle, there is all that horrific and immeasurably long-lived waste to deal with all over the earth now. Surely, we can truthfully say that it is never too late to at least stop doing things that are

stupid and dangerous.

Number 2. The nuclear industry makes unbelievable profits doing all this dirty work and it's all about money, power and control. Dr. John Gofman, PhD and MD, who helped isolate the world's first milligram of plutonium for the Manhattan Project in 1942, then later became a passionate and vocal dissenter from the nuclear project, explains very cleverly and amusingly in his book "Irrevy" -- it's this book and I would recommend it to anyone, "Irrevy: An Irreverent, Illustrated View of Nuclear Power" -- all about this power and control business. I highly recommend this book. Gofman, now dead, was smart as heck. He was also quite funny.

Number 3. The nuclear industry made a deal with the World Health Organization back in 1959 that ensured that severe limitations have always existed on research into health effects of radiation exposure. The shadow cast by this deal has ensured that the real roots of the appalling cancer epidemic now taking place on our planet are not screamingly apparent to everyone the way they ought to be.

Number 4. The nuclear industry cannot be trusted, not even a little bit. This hearing has made that clear more than ever. Spreadsheet

errors, yikes!

One day recently, sitting on a streetcar, I brainstormed a list of names synonymous with nuclear public deception. I know it's wildly incomplete but here is what I came up with in a very short brainstorm off the top of my head: Brooke Haven National Laboratory, Long Island, New York; Chalk River, Ontario; Chernobyl -- photos of deformed children can break your heart; you really might want to take a look at this book sometime and see the pictures. Depleted uranium, more deformed children who could cause you to lose a night or two of sleep. Those pictures on the Internet are -- well, I can't look at them actually. I'll admit I can't look at them, they're too horrific. But they're there and they're extremely upsetting.

Dounreay, Scotland; Elliott Lake, Ontario; Hanford, Washington; Hiroshima; large swats of Nevada and Utah; Oak Ridge, Tennessee; Port Hope, Ontario; Savannah River Site, South Carolina; Three Mile Island; Rocky Flats in Colorado; Suffield in England; SRB Tritium Light Facility in Pembroke, Ontario; and boxes falling off a delivery truck in Ottawa one winter and cordoned-off streets. I'm not making this up.

And I could say much more about SRB, the issue that first grabbed me and where CNSC staff "did not predict well on a groundwater tritium plume." I met folks up there who have wells polluted with tritium and one very old woman who said memorably she'd like to throw rotten tomatoes at CNSC tribunal members.

SSI Tritium Light Facility in Peterborough, Ontario, 18 years of underreported tritium emissions. Yikes!

Super fun site in Bloomsburg, Pennsylvania, left behind by the same man who ran SSI in Peterborough until his company was caught out deceiving everyone about those tritium emissions.

Russian sites whose names I've forgotten. My more knowledgeable colleagues could no doubt name some others. And I almost forgot to say Fukushima.

Which brings me to number 5 in this list of five major things I've learned about the nuclear industry. Nuclear regulators are always in a very cozy relationship with the nuclear industry. I think we're all familiar with the phrase "Foxes minding the henhouse." Same deal.

The nuclear disaster at Fukushima is said to have been caused by institutional failure, with

the key element being the collusion of the nuclear regulator and the industry. But the problem is not just a Japanese one, it's a global one. We have the same problem here.

So moving right along to this local GE Hitachi plant which is located in a now densely populated residential area of Toronto, with an almost total lack of awareness on the part of many residents as to its decades-long existence and its dangers.

Which reminds me of the SRB plant in Pembroke. I went door to door in Pembroke. Lots of people there didn't know about SRB either. And SSI in Peterborough. And oh so pretty but oh so polluted Port Hope.

In each of these cases, the situation is scandalous, shocking and outrageous and it seems difficult and almost impossible to believe these things have been permitted to happen.

Common elements are that the nuclear industry is quite expert at giving members of the public and politicians and members of the health community false reassurances; outright lies; statistical manipulations using averaging, thus concealing emission spikes -- and this is probably used for every single nuclear facility on the planet; false

data -- the recent closure of SSI in Peterborough after close to 20 years of false data is an absolutely mind-boggling case in point; and showing a cavalier disregard for the lives and health and safety of workers and nearby residents.

A few weeks ago I heard Rachel Lane, the CNSC's epidemiologist, tell a room full of people out in Whitby, in Durham Region, which is where I spent most of my adult life, that a little radiation is not a problem. I was flabbergasted. Her information is decades out of date and just as wrong as wrong can be. I think everybody in this room knows that. Her intent clearly was to mislead.

Ms Lane's colleague, Dr. Patsy Thompson, has acknowledged that radiation causes cancer and stated at the Darlington New Build hearing -- I'm quoting from the transcript here:

"A wealth of knowledge of the carcinogenic effects also has been derived from experimental studies of animals and culture. Many human cancers have been linked to the carcinogenic effects of radiation. However, the important questions are not

whether ionizing radiation causes cancer but how much cancer is caused by radiation."

(As read)

She seems to be saying that the nuclear industry maybe isn't causing enough cancer or something. I'm not sure. I would say entirely too much -- it's causing entirely too much cancer.

I recently reread the Kelly McMasters book -- this one, another one I'd highly recommend -- "Welcome to Shirley: A Memoir from an Atomic Town," which tells the story of the poisoning of groundwater at the Brookhaven National Laboratory on Long Island and the resulting epidemic of cancer there, including many cases of an otherwise extremely rare, often fatal illness called -- and I may mispronounce this -- rhabdomyosarcoma among very young children, many of whom died. You can't make up stuff like this.

And I suppose perhaps within the nuclear industry, places like the town of Shirley and maybe Long Island itself even are viewed and accepted as nuclear sacrifice zones. But a nuclear sacrifice zone in the middle of Toronto?

We know from the experiences in all those disaster locations I listed a few minutes ago

that the nuclear industry would never in a million years notify nearby residents of any health impacts or cancer clusters even if they knew about them.

At Brookhaven National Lab, as it's explained in the book "Welcome to Shirley," there was a 12-year tritium leak into groundwater, and at a public meeting held to discuss what was going on there, lab officials "repeatedly retreated into obscure technical answers and jargon," rather than simply tell the truth and admit to what they had done. It sounds pretty familiar to many of us here.

Unfortunately, I might add, it's not just the industry that is reluctant to deal with health issues. It seems one can never get the health establishment to listen to news of cancer clusters either. It's not statistically significant, they will claim, as they did in Woburn, Massachusetts, a story told in the book and film "A Civil Action." Not nuclear causes in that instance but the same pattern of people being poisoned and all the authorities failing to protect local citizens. More collusion.

To conclude, this facility does not have public support. Out in Durham Region we are always being told that the nuclear facilities have public support -- this happened at the same meeting the

other week that Rachel Lane was at -- but this usually means the local politicians support it. And in Toronto we certainly know all too well that what some of our politicians have to say has about as much weight as a helium balloon and no public support whatsoever.

And I want to say for the record that I am really and truly sorry that I, like so many of us here on planet earth, spent far too many decades believing in fairytales, trusting politicians to have our best interests at heart -- what an idiot I've been -- expecting corporations to own up and clean up their messes. We've allowed ourselves to be deceived and to follow leaders like that old fellow hiding behind the curtain and claiming to be the Wizard of Oz in that movie we've surely all seen. There have been a lot of Wizards of Oz, I think.

Many of us have come here to tell you during this hearing that it is no longer considered acceptable to spew dangerous toxins all over our neighbourhoods and our world, and in the immediate case of this GE Hitachi plant, definitely, definitely not at 1025 Lansdowne Avenue in Toronto.

So I respectfully request that this facility be shut down. The sooner, the better. Please and thank you.

THE PRESIDENT: Thank you. Anybody?
Questions?

Dr. McEwan.

MEMBER McEWAN: Thank you, Ms
McNeill.

In your letter leading up to this, you make a comment that's been made a number of times yesterday around low doses of radiation being more harmful. Can you tell me where those data come from please? It would be very helpful for me to understand.

MS McNEILL: I'm not sure if I know on that but I will find out. I've been aware for years. I worked on the test site issue for many years. In fact, I had a spare quote I'd love to leave with you. It's somewhat relevant.

Often, low doses of chemicals are also more toxic it turns out. It seems counterintuitive, but this is -- I mean, scientists have known this for quite some years now that often low doses, fetuses are tremendously susceptible to low doses of chemical exposures; you can walk by a sprayed lawn when you're pregnant and you're not just damaging your own fetus and so on.

MEMBER McEWAN: Okay, that's fine.

MS McNEILL: I will find the

reference. I will find the reference and send it to you.

MEMBER McEWAN: But, you know, you have made a very specific claim and it would be helpful to have had the reference so I could have reviewed it before this meeting and we could have had a sensible conversation around it.

MS McNEILL: Okay.

MEMBER McEWAN: So if you could send it to me, that would be really helpful.

MS McNEILL: I will be happy to do that.

MEMBER McEWAN: Thank you.

MR. LEBLANC: When sending material, please send it to my attention --

MS McNEILL: Sure.

MR. LEBLANC: -- or to interventions account. As you know well, Louise will ensure --

MS McNEILL: Yes, sure.

MR. LEBLANC: -- that it gets...
Thank you very much.

LE PRÉSIDENT : Monsieur Harvey...?

MEMBRE HARVEY : Merci, Monsieur le Président.

I just want to come back on the

point, we touched it yesterday at the end of the day, it's in the written submission of Mrs. McNeill, that's the third-party information you mentioned. You told us that it would be made public, but I would have the same question to GE, if you have got the third-party verification on the emissions, would you make it public right away?

MR. DESIRI: For the record, Paul Desiri.

Yes, we would make the results public. Yes.

MEMBER HARVEY: Okay. Thank you.

THE PRESIDENT: Anybody else? Ms Velshi...?

MEMBER VELSHI: I have also a question from the written submission and this is around spikes as opposed to reporting of averages. And I know this is a question to GE.

In your own presentation you give for both air and water emissions averaged over the year, but is there a fluctuation? How often is your sampling done? Is it done on a daily basis and, if it is, are those results available to see if there is any spiking that's happening?

MR. DESIRI: For the record, Paul

Desiri.

So I just want to start by saying there was a comment about limits being too high, so it's important to understand that there's four different layers of defence with respect to any parameter, whether it be an emission or a workplace measurement.

So at the top is the limit. So the limit is a level above which it is considered unacceptable. Below the limit is acceptable in terms of some kind of a consequence, whether it be radiation dose or chemical effects. The limit, then below is the actual discharge limit. In our case that is 1/20 of the limit.

Below the discharge limit is the action level. Below the action level is the control level. Below the control level is performance.

So starting off with water, the limit, which is based on public dose, is 500 kg a day, okay. The discharge limit is 1/20 of that, so 25 kg.

The control level -- or, sorry, the action level is a couple of kilograms a year, so on a daily basis that would be 100 g. The control level is half of that and the performance level is below that.

So if you think about it in terms of

the unacceptable consequence and the limit, you know, whether it's high or low, it's not really relevant. Think about the different layers of protection you have and where we are. I think it's important to recognize that.

To answer your question, there are fluctuations, it depends on which emission you are talking about. If you are talking about air, you know, the concentration, the action level of 1 milligram per cubic metre of air, daily -- we measure on a daily basis. You can have anywhere up to one, but typically it's in the 0.1 range on a daily basis and often it is zero. So you get some day-to-day fluctuations, but all the readings are obviously a lot lower than the action level and the average is a lot lower.

And I'm not sure if I answered your question.

MEMBER VELSHI: Yes, you have and thank you for walking us through the different limits. I think, again, you have seen the level of concern and the importance of transparency and we all know averaging doesn't always give the information that one desires because it can hide a lot of stuff.

So if there is fluctuation, even if it is within your control or action level, I think it

would be helpful to make that information public.

MR. DESIRI: For the record, Paul Desiri.

I think that there is lots -- I mean, we do lots of measurements, we do all kinds of measurements, whether it be air, water, soil, workplace, and it's a decision on which data is worth communicating.

So we are happy to be here and be part of this process where we can get comments from the members of the public on what they want to see, because that's what we want to do, we want to provide that information. So I think what we will do is, we will reconvene after this meeting and take a look at some of the comments and see which ones make sense to make public.

But, you know, all the measurement data we do is potentially something we can post on our website or find another way to get to the public.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Mr. Tolgyesi...?

MEMBER TOLGYESI: Just one, to the staff. Should licensees report when action level is reached and what's happened after?

MR. ELDER: Peter Elder, for the

record.

Yes, they are required to report any exceedance of action level and then they are required to do investigation onto the causes of that exceedance. And you noted when we did a report in the presentation yesterday, we also reported to the Commission all exceedances of action levels and what was done about them.

MEMBER TOLGYESI: And what happens if it's not reported?

MR. ELDER: If you are not reporting, again, it's a requirement in the regulations to report any exceedance of action level.

THE PRESIDENT: Okay. Anything else?
Okay, Ms. McNeill, any final comment?

MS McNEILL: I made a comment about the Wizard of Oz.

MR. LEBLANC: With your mic, please.

MS McNEILL: One of the wizards -- I'm really dense about mathematical matters, I always have been, it's just not something I'm good at. I think I'm fairly good with my words on occasion, but I'm not so great with mathematics, and I think a lot of us get fooled and I think it took me a little while to figure out that I believe the nuclear industry does

this stuff deliberately to deceive us, this whole averaging business.

A statistic I came across by fluke -- I used to work on pesticide issue -- a gram of 2,4-D -- this is from a government publication, Ontario Federation of Agriculture, Agriculture Canada, OMAF, so a government publication -- one gram of 2,4-D can render 10 million litres of water unfit for drinking and that amount of water is equal to the amount of water used by 78 Canadians in one year. That's one gram.

Sometimes these little statistics are helpful to compare things with, one gram of 2,4-D, so...

Anyway, that's it for me.

THE PRESIDENT: Okay, thank you.

Thank you very much.

--- Applause / Applaudissements

MR. LEBLANC: So we have an agenda, but our next two presenters are probably stuck in traffic or on their way here. So Mr. Rudka was here early enough and has accepted to speak right away, so I will let the President introduce you.

MR. RUDKA: Thank you.

MR. LEBLANC: This is CMD M51.12.

THE PRESIDENT: Okay. So I guess, Mr. Rudka, the floor is yours to make a presentation as outlined in CMD 13-M51.12.

Please proceed.

13-M51.12

Oral presentation by Dan Rudka

MR. RUDKA: Thank you very much, Mr. Binder. Good morning, ladies and gentlemen of the Board.

I wish speak to you this day about my personal experience as a nuclear worker from Port Hope. The refinery that I work in is very similar to the General Electric-Hitachi Plant here in Lansdowne, Toronto, from the nature of the work and the location of the plant in a community neighbourhood.

I ask that you please be patient.

My background, briefly. I worked the nuclear industry in Port Hope from 1993 to 1995. Shortly thereafter I became ill with a variety of health issues that by 2001 had me hospitalized in a very serious state.

I had up to that point experienced problems starting with daily vomiting, severe sweats,

chills, fever and nosebleeds, then a blood disorder, then radiation skin damage to my face and arms.

I've had facial bone deterioration requiring titanium plates in my forehead and my cheek. Intestinal problems, liver, kidney and joint pain are common.

The most serious damage has been to my lungs and I have required multiple surgeries, tests and several emergency hospital attendances.

In 2007, already aware that I was suffering from uranium exposure, I was tested for that exposure by the Uranium Medical Research Centre, UMRC. The urinalysis testing found that I had been exposed by way of inhalation to U235, U238, enriched U238 and U236, spent reactor fuel.

Later, at a CNSC hearing in Oshawa, and only after, and probably because of the UMRC findings, did Cameco at Port Hope admit to recycling spent reactor fuel, and they did so without a licence from the CNSC or the CNSC's knowledge.

I also was not aware that I was handling this material that would be expected to contain plutonium and polonium. No action was taken against the company by the CNSC.

Now, the other interesting aspect to

the testing was that several residents were also tested. They also showed positive for exposure to U235 and U238. These residents revealed an evident issue with airborne uranium particulate and exposure to the population in Port Hope by way of inhalation and inhalation is the most dangerous method of exposure.

Given that the GE operation is very similar to the Port Hope plant, I would expect that proper urinalysis testing of the nature of the UMRC's would show that the Lansdowne residents, past and present, as having some level of contamination.

For comparison, some of the containment issues in Port Hope presented in Cameco's 2011-2012 compliance reports, Cameco works on projects which examine ways to reduce in-plant uranium in air concentrations. This confirms the airborne particulate is within the plant.

The summary of the Port Hope conversion facility contamination limit states uranium contamination is identified at various areas of the yard, confirming airborne emissions outside the plant, and total effect for workers has increased from 5.28 mSv in 2007 to 8.82 in 2011.

Now, although Cameco performs a more extensive operation, these same issues of uranium

particulate outside the plant can be expected and has been found at some level at the GE operation.

The bottom line is, both Cameco and GE cannot control uranium emissions.

Residents may also be concerned as to what type of material that GE is working with. Given the Port Hope situation, there is no possible way to be sure what the present operation entails. Are they enriching uranium? Are they working with recycling fuel? How can we know when the CNSC didn't know what was going on with Cameco in the former Zircatec facilities in Port Hope.

So how can the residents be sure that they are not affected? Well, they simply can't. Does a child with an ongoing cold or allergy or extreme fatigue, nosebleeds, tight chest think anything is wrong? No, probably not, it's going to continue being kids. Well, what about later, will something more significant develop? What about the latency period with uranium? A child with or without symptoms becomes seriously ill, five, 20, 30 years later?

And it's not always about the cancer that CNSC often refers to as a measure of exposure, there can be a great deal of suffering with many health issues after exposure and long before cancer. And, in

my opinion, by the time that we are tallying cancers, it's already too late.

We also know that there is only so much uranium on this Earth and it will run out. The plan at that point is to recycle the uranium that we have, no matter what form. Plutonium reactors will be the end goal, so in the future the nuclear industry will be using increasingly more dangerous fuels and there is certainly no room to work with these dangerous materials in a populated area. Relocation to an unoccupied area with a considerable buffer zone could be the only option.

As we have seen with history, but we never seem to learn, that human error is the bottom line in all our disasters. We refuse to recognize that we have no control over nature. We make estimates on available information on various scenarios and situations and too often hope that our experts, the scientists, have it right.

Now, with this in mind, a survey of federal scientists in 2013 entitled "Barriers to the Effective Communication and Use of Scientific Evidence" examined the current state of the 'Canadian federal government science' and some of the findings are not comforting.

For example, 74 percent of scientists felt that public sharing of science findings was too restrictive. Collaboration with colleagues: international, academic, private, government or one's department or agency have been compromised. 73 to 41 percent of scientists surveyed in relation to the above levels are concerned.

The record also states that, "half of scientists don't feel free to share their work with the public, even when appropriate", and "many report interference from various sources."

Most disturbingly, half of the federal scientists are aware of cases where the health and safety of Canadians or environmental sustainability has been compromised because of political interference.

At the CNSC level, another recent survey done by the Professional Institute of Public Service of Canada (PIPSC) by the "Environics Research Group" -- and that was dismal, to say the least.

Some of the findings, more than half of -- that's 57 percent -- of CNSC employees surveyed were aware of cases where the health and safety of Canadians have been compromised; 50 percent didn't feel they could publish their work in peer-reviewed journals; 94 percent of the CNSC's employees reported

interference with manuscripts and/or conference presentations. And that is astounding as it is concerning.

The *Nuclear Safety and Control Act* states that it's:

"...an offence who
(a) alters, otherwise than pursuant to the regulations or a licence, or misuses anything the purpose of which is to
(i) protect the environment or the health or safety of persons from any risk associated with the development, production or use of nuclear energy ..."

And it does go on.

"The CNSC was among the groups most likely to be asked to exclude/alter information in federal government documents for non scientific reasons."

And 93 percent of CNSC employees surveyed agreed that the public would be better served if the federal government strengthened its whistle blower protection.

Now, this failure that's consuming scientists at the federal level and beyond creates another risk factor for the people of Lansdowne as well as Canadians.

This situation with "science" and the CNSC, the very people that are to protect us, cannot do a professional, accurate and safe analysis of their work when they appear to be operating with a restricted measure due to fear. How are these residents living around Lansdowne GE facility supposed to find comfort and safety when they are at undue risk for the simple fact that the regulator, the CNSC, appears to have lost the initiative in regards to the health of Canadians?

MS LESTER: Shame! Shame!

AUDIENCE MEMBER: Shame!

MR. RUDKA: It is no longer the GE plant that is the only problem, it is also the regulator's ability to honestly, openly protect the people. The people need clarity in order to understand and it is not there.

A recent example of how the confusion occurs, at the CNSC hearings of the deep geological repository proposed for Georgian Bay, Dr. Patsy Thompson spoke of the new transparency and I have already heard it in this little bit this morning about

the new transparency or transparency within only the last 10 years.

Then, while discussing nuclear-related cataracts and skin burns that are relevant at "high doses", Dr. Thompson stated that 7,000 microsieverts was the threshold for skin burns, 5,000 microsieverts was the mark for cataracts. The dose sounds really high in microsieverts, but however in mSv the measurements are 7.0 mSv and 5.0 mSv; the dose allowed the public is 1 mSv per year. Using microsieverts measurement rather than millisieverts was only for the purpose of making the exposure dose for damage appear to be very high when actually it is not that high at all.

It is not an effort in transparency, it is an effort misleading and unfair to those wanting to understand. And I will add on that I have extensive radiation damage to my skin and I recently had cataract surgery. Three months ago I couldn't have read this paper.

There is one more factor to be considered, too, in this worldly and continuing problem, this worldly and continuing disaster of Fukushima. We need to be aware that this nuclear accident has affected our world like no other disaster.

The Pacific Ocean has been contaminated and continued radiation release that is being spewed out in the atmosphere and in the wind and the jetstream is contaminating our air.

Already an exposure victim, I have been affected by this disastrous fallout. Six to eight weeks after the disaster I started showing familiar signs. It started with nausea, vomiting, sores, lesions, developed fatigue, facial pain and started into sinus and lung infections. I have had to attend hospital for breathing problems on a couple of occasions.

Ten months later I was issued oxygen for emergency use. Later a simple -- very simple but required surgery landed me in the Intensive Care Unit for several days because of my lungs. I shouldn't say it, but my wife almost lost me then again.

Anyway, last April I was put on full-time oxygen, since I have experienced several lung infections. My lungs are deteriorating. There is no doubt about the cause. And last Monday at the hospital I was introduced to the Transplant Department and the members of that team. My lungs have very little life left in them and I need the transplant.

Please consider all these factors

when thinking about the population around GE-Hitachi plant. The CNSC, nor the GE-Hitachi can truly expect that the plant is not releasing harmful uranium particulate into the air. Also consider the direction that nuclear fuel is heading, more refined, more radioactive, more dangerous, not suitable for production work by people or to be anywhere near people. Add to this the Fukushima burden that we all have no choice about, and consider the failure of the federal and CNSC science, and you are asking too much from the people that are not well informed, but informed enough to know they have not been getting the whole story from the GE facility that has them rightfully worried and concerned.

Now, please consider my position in the evidence that I have mentioned to you today, but also comments shared with me over the years from Cameco Vice Presidents of Operations. One stated, "We have never seen anyone as sick as you", confirming he knew that I was sick and that others have been sick.

Another shared with me that he was aware of the method of my exposure. He knows how it happened, but went on to state that he did not believe that my exposure is why I have become so ill, and yet another confirmed my exposure to spent reactor fuel.

Some CNSC staff on an individual basis have apologized to me for what I have gone through. And in the face of all this knowledge, I am left with these serious medical conditions and the costly financial burdens that will increase with this deadly exposure, without recognition or compensation, and although many people appear to know what has happened to me.

And how does this type of situation affect the confidence of the people's sense of security in the Lansdowne area? How can the local population count on being protected or cared for in the event of an accident when the industry and the regulator can't save or assist one nuclear energy worker that they know for certain has been extensively exposed to uranium?

MS LESTER: Shame!

MR. RUDKA: And I agree with that totally. Although there are similarities to Port Hope and here GE, there is one difference that stands out and that is the operation is small. It does not overwhelm as Cameco in the Town of Port Hope. By that virtue alone it becomes realistic that the GE operation in Lansdowne could be relocated and, in reality, the plant needs relocation; it needs an open area, a buffer zone, possibly the Peterborough and Lansdowne

facilities should be together in the proper area for this type of operation.

I believe that there is a solution, it is just going to take some brave people from GE and CNSC to make that happen. And that in itself is a very tall order, finding brave people to do what's right.

My final comment. We have collectively been concerned and protected against nuclear war, an action that would be the dread and the possible downfall of the world's people and yet it appears it has fallen upon us, it's just that none of us thought that or expected that nuclear atoms for peace from Port Hope, Toronto's GE plant, Chernobyl and then Fukushima, would be the threat that we face.

This is a nuclear war that we never saw coming and the CNSC cannot do a thing about it.

MS LESTER: Shame on you.

THE PRESIDENT: Thank you.

MR. RUDKA: Thank you for your time.

THE PRESIDENT: Thank you. Thank you very much.

--- Applause / Applaudissements

AUDIENCE MEMBER: Shut it down! Shut it down! Shut it down!

THE PRESIDENT: Anybody? Anybody?

Any questions? Ms Velshi...?

MEMBER VELSHI: A question for CNSC staff.

The intervenor makes reference to a survey done by the Professional Institute of the Public Service of Canada and some concerns or fairly extensive concerns raised by CNSC staff on this survey on their ability to do their job properly as a regulator.

Can you comment on that?

MR. JAMMAL: Ramzi Jammal, for the record.

With respect to the public survey and the PIPSC public survey we did have the -- especially our staff at the CNSC with respect to -- if that's the one where you're asking with respect to the PIPSC public survey and quote/unquote was headlines of "Muzzling of the scientists", CNSC staff, we have the most open safety culture, at the CNSC itself, with an open door policy.

So when the survey came out, we discussed with our staff what -- where the numbers are coming from? and why staff felt that there is such issue. The internal discussions and even the union members', their representations, they could not provide the answer because we want to take action, with respect

to correct the perception if there is any staff member that feels he or she is being muzzled.

The fact, it speaks for itself. If you look at the CNSC website the publication by CNSC staff, the freedom that our inspectors do have, the decision making by the inspector with respect to health and safety.

As I repeated yesterday, our inspectors on their own, independently without any consultation can shut down a facility. The inspectors on their own in the field can write up any report with respect to the findings. They have no influence in any way, shape or form, either by the Commission itself as a tribunal nor by the management. So the decisions are being made by staff.

On the scientific basis the dissemination of information and our staff engagement internationally or nationally, submitting their abstract based on their findings, based on their discussions, and there is no muzzling in any way, shape or form.

MEMBER VELSHI: So how do you explain results that more than 50 percent feel that health and safety is compromised?

MR. RUITER: Good question (off microphone).

DR. THOMPSON: Patsy Thompson, for the record.

I'll respond to your last question and maybe provide a bit more information to what Mr. Jammal has stated.

My sense from discussing it with my colleagues and my staff is that the perception sometimes that opinions don't get considered fully is in relation to how we respond to scientific uncertainties.

In all the assessments or most of the assessments we do, the science is complex. There is a range of uncertainties and often the translation of a scientific or technical assessment into a regulatory decision takes into consideration the scientific uncertainties but also the safety factors and the safety systems that are put in place to account for the uncertainty.

The sense we have after discussing it is that often we're not very good at communicating how we've taken into account the uncertainty in making sure that the safety systems take into consideration those uncertainties.

And so certainly there is an onus on us to better explain how science that are used and

scientific assessments are used in decision making or in recommendations to the Commission.

The other element I wanted to add is I've been with the CNSC since 1993. Certainly, I have seen the reverse. There is much more encouragement over the last five to 10 years to actually make our assessments and publish in the open scientific literature than there ever was in the past.

In the past it was seen as not the CNSC's or ACB's job to be out among their scientific peers. That culture has changed significantly over the last few years and a lot of our work is peer-reviewed and does get published in the literature.

MR. JAMMAL: Just to conclude, if you'll allow me, sir, we've got inspectors in the field and we can ask them direction.

With respect to health and safety I want to conclude our inspectors are independent, for issuing orders and shutting down operations without consultation. So there are two elements; from the physical element that our inspectors do have the power to do so? Yes, they do. So to meet health and safety requirements our inspectors do issue orders, do issue inspections, do issue directives with no interference, not even consultation with the head office. It's based on

their own findings independently.

The discussions Dr. Thompson spoke about, we are a scientific organization. The debate is very much open. We know our job and the independence of our inspectors and, yes, there are sometimes discussions and can be transformed to a position but that's a normal healthy scientific discussion.

MS LESTER: (Off microphone).

THE PRESIDENT: I just want to add that the statement about brave interference, I can tell you I've been in this organization for six years. I've never ever got any political interference in our decision process. So whoever come up with a political statement is wrong, absolutely wrong.

And just for the record, you should read the professional survey, the Professional Institute survey. There were 79 people from CNSC. This is out of 850 employees. It's not representative. And you've got to read the actual data carefully to understand what they're saying.

We have been encouraging more and more scientific publications by our staff. They post all our findings, et cetera, et cetera. So some of their findings here are misinterpreted.

Over to you, Mr. Rudka.

MR. RUDKA: If I may come down on one or two things, somebody is not being truthful. And I hardly think somebody would put out a survey like that on the chance that they are not being truthful and the CNSC will have them in the courts for it, I'm very sure.

I personally have seen issues that I'd be concerned about miscommunication within the CNSC. You know, your epidemiologist looked at me and she's never seen radiation burns. She didn't know what she was looking at, didn't have a clue.

So you know there is pressure. Maybe you don't see it but it's the upper echelon. It's you people at the top that the word is not getting to because they don't want to talk to you guys. They do it on their own because there is fear there. When I have a lady that says to me three times over that "I am so sorry for what happened to you but I'm speaking on my own, I'm not on behalf of the CNSC", there is some fear there.

Personally, I don't know. Maybe you guys just need to be completely revamped and redone and get away from the science. Take the science, do something else with it because it's the medicine. It's the medical end.

You can hit me with all the science you want and tell me that I didn't get enough radiation or anything else to cause me harm. I can tell you right now it's killing me. It is taking my life away. Without a transplant I've got less than two years and with it I might get an extra five. It's all because of this shit that you guys deal with called uranium, and nobody cares.

THE PRESIDENT: Thank you.

MR. RUDKA: I'm sorry for my language.

THE PRESIDENT: Thank you for your intervention.

--- Applause / Applaudissements

THE PRESIDENT: What is the next one?

AUDIENCE MEMBERS: Shut it down.

Shut it down. Shut it down.

THE PRESIDENT: The next submission is an oral presentation from Ms Diane Boskovic, as outlined in CMD 13-M51.48. Please proceed.

13-M51.48

Oral presentation by Diane Boskovic

MS BOSKOVIC: Hi, thank you.

I guess the questions that I sent in my email I will ask those after I finish presenting some of my thoughts and other questions. I don't expect what I share with you now, those questions to be answered. I just want you to know what I'm thinking.

So it seems clear that the aspirations presented in the last few days are of environmental damage, sustaining comfort level, being dependent on nuclear power, restoring assurance on confidence in nuclear power, creating a revised advertising campaign for nuclear power, moving nuclear power plants out of sight, out of mind and just that the population is safe.

And then -- so I'm just going to start sharing with you just points.

Why are we not slowing down -- no, sorry -- why do we not slow down population power needs? Is nuclear energy the best solution for all our power needs?

Why are we assimilating nature? Is it okay to move a nuclear power plant to another area where it is not densely populated and still use the same amount of electricity we use? Population will increase -- population will increase. In turn, a not so densely populated area will become a densely

populated area so we will be at the same place again in 50 years.

Why is it that we don't question each other when we feel or know we are doing wrong?

Why are we not talking about energy consumption and how much population is using exactly? For me it is disturbing that we take better care of nuclear power plants than we do people. There are people in this country that are living in third world conditions.

Why are we not interested in all the particular details about population energy consumption?

Why are we not looking into -- is this working -- Why are we not looking into how to be independent of so many machines that bring us comfort?

How selfish are we all to have so much when some do not?

Why are we not open to free energy? Why are we not reversing our use of electricity, slowing down electrical use so that we create an alternative power source?

Why is no one adjusting the growth demand of population -- energy use? Sorry.

Just because we are using nuclear energy for so many years and improving safety

regulations protocols, ad campaigns, does not make it right to continue to use nuclear energy.

What agreement -- what agreements did we sign to have nuclear power plants functioning? How many mistakes do we need to make before we perfect nuclear power generation?

What was the original agreement that was signed 100 or so years ago when this plant downtown in Toronto was first opened, I suppose?

And because of Chernobyl and Fukushima, it almost seems it's like Russian roulette. What other place will be next? Who's next, I suppose?

Where are all the scientists and innovative thinkers?

And I'm interested in creating public space for respectful dialogue regarding alternative energy sources. I'm interested in off the grid living. I'm interested in the least amount of risk and damage to population and environment.

I'm interested in a forum of public opinion, a well-versed collection of people that sit together respectfully and create an open space to communicate to create better solutions of how to meet population power needs.

I am interested in a Commission for

change.

I also feel that we are all here because whatever we've presented, this will make for a better nuclear power advertising campaign, and how much money will be spent in the next advertising nuclear power campaign.

Instead of building more nuclear power plants, how about allocating space in each province for future population to live off the grid and have government incentives to encourage population in the direction of living off the grid?

This is kind of silly, but I'm going to say it anyways. How about we genetically modify man to become ectotherms? Basically, that way we will operate at a very economical metabolic rate.

And so the questions that I sent in my email are, where are all the radioactive wastes stored, like specifically where are those locations? And are there any plans in the future to shut down the GE Hitachi plant on Lansdowne? And are there any future plans to generate electricity by other means?

And why do we, as a society, need to continue to generate electricity the same way for more than 50 years?

That's it. Thank you.

THE PRESIDENT: Thank you.

Questions, anybody?

I just wonder if you read the Ontario long-term energy plan. It was published last week. I think this is the Government of Ontario vision of the future.

I suspect if you read it, you'll see what the government has in mind with respect to the long-term energy, all the issues you were dealing with.

Anybody want to add anything?

Okay. Final comment? Any other additional comment?

Okay. Thank you for your intervention.

MS BOSKOVIC: Oh, yes. The questions that I asked --

THE PRESIDENT: We have dealt with particularly most of your questions before, if you were here yesterday, and we will continue in the rest of the day. You're going to hear many of those questions repeated again.

Thank you.

THE PRESIDENT: I'd like to move to the next submission, which is an oral presentation from Mr. Zack Ruitter as outlined in CMD 13-M51.49.

MR. RUITER: My name is Zack Ruitter, and I am idle no more.

I would like to acknowledge that, today, we are hosting this meeting on stolen indigenous territory, the traditional territory of the Haudenosaunee, or People of the Longhouse. So this is their stolen territory.

This is actually a historic moment right now. This is the first time that the people of Davenport and Toronto have got a chance to be heard on what was once a secret GE Hitachi uranium fuel processing plant, 1025 Lansdowne, Toronto, West End.

I understand that the plant has been open for 58 years, and I have questions. Questions, questions, questions. And for the record, I would like GE to answer these questions right now so that we can get them on the record moving forward.

Have the release limits changed since day one of the plant's operation? Have the older generations of workers been followed up with any meaningful study of health and mortality?

Yesterday, we heard Peter Mason, CEO of GE Hitachi Canada speculate that if a train car carrying crude were to derail at the site of the plant and cause a massive explosion that this would be the

worst-case scenario.

My questions for GE Hitachi are, would this worst-case scenario be insured? And if it is this worst-case scenario, for how much money and by what insurance company?

I'd also like to know the names of the third parties who conduct any of your so-called independent verification of emissions monitoring.

I would like to know what is the suspected cause of GE Hitachi's own self-reported high contamination of soil reading that was taken in 2009, I believe, of 30.9 parts per million -- 30.9 parts per million. Thirty point nine (30.9) parts per million.

This is well referenced in the intervention by the International Institute of Concern for Public Health as well as from Marnie Bjornson and Simon Chessman.

I would also like to know how many kilograms of waste is released from the plant by truck, be it carbon filters that do emissions filtration, used components and used uniforms and the like. And before I put my questions to General Electric, I would just like to say that Toronto wants to know if their Mayor has been smoking crack and if he's been lying about it.
--- Laughter / Rires

MR. RUITER: And similarly, we need to know if GE Hitachi has been releasing uranium into our city and hiding it.

THE PRESIDENT: Are you done?

MR. RUITER: I'm ready to have General Electric begin to answer my questions to my satisfaction.

THE PRESIDENT: Thank you for the intervention.

Commissioners? Anybody want to start?

GE, are you -- you heard some of the questions. I'm sure some of them were already dealt with, but go ahead.

MR. RUITER: I can repeat --

THE PRESIDENT: Don't repeat.

Please go ahead.

MR. RUITER: I would like answers to all my questions, for the record?

THE PRESIDENT: Can you go through the process? Let me handle GE.

MR. RUITER: Okay.

MR. DESIRI: For the record, Paul Desiri.

So you know, over our 58-year history

making pellets -- and again, some of the intervenors -- earlier intervenors were questioning what we process. We process natural uranium pellets.

We're a safe and secure facility. We have been throughout our history.

As far as the release limits changing, yes, release limits have been changing. They've been going downward over the years. And we've always respected the limits.

And as I was mentioning earlier, we're not even talking about the limits. We're talking about three levels down. Limits, action levels, control levels, actual performance.

So there's a significant safety margin there with respect to environmental emissions, environmental performance.

As far as insurance goes, I can tell you that all of the possible scenarios, all the possible things that could go wrong have been analyzed in great detail. And you know, what Mr. Ruiter said about the train is actually incorrect.

But all of those details are in our safety report.

THE PRESIDENT: Do you have insurance and --

MR. DESIRI: And we do have insurance. Of course we do, yeah.

And we have independent third parties assessing the amounts to determine that they're acceptable.

And this is not a one-time thing. This is done on an ongoing basis. The insurer does annual reviews of our facility, comes in and does a full review of possible risks, possible changes and the amounts are reassessed.

THE PRESIDENT: Staff, what do you say about requirement for insurance?

MR. ELDER: Peter Elder.

We have -- there is requirements around if there's a requirement under *Nuclear Liability Act*. Otherwise, we don't have any specific requirements for insurance because these are covered by the provincial rules around corporations.

THE PRESIDENT: But under the *Nuclear Liability* in which the government says they're going to now increase to one billion, do they fall under, should there be an accident -- I'm just trying to understand -- do they fall under the *Nuclear Liability Act*?

MR. ELDER: I would have to go back

and check. My recollection is they do not for this facility. So they would have to be covered -- that means they got no special liability protection, they must follow the normal company liability protection that every corporation in Ontario must have.

THE PRESIDENT: So you do have those kinds of insurance?

MR. DESIRI: For the record, that is correct.

And just to elaborate a little further, you know, there's categories of facilities, of course. You know, there's nuclear power reactors, which we're not; there's nuclear installations, which we're not. We're a Class 1B facility.

So for those other two categories we're talking about different risks, different insurance issues. We're a manufacturing facility that makes natural uranium pellets.

I want to take the waste issue, and then I'm going to defer to Peter Mason. As far as waste goes, I'm happy to report we actually have a very good story with respect to waste.

There's been discussions by other interveners about nuclear waste. We're actually 99.99 percent of all the material coming into our facility is

either used in product or it's recycled.

So, you know, if you look at other industries, I mean, I think that's a good story.

So the quantities -- so the quantities of solid waste that are generated are less than .01 percent of the amount of material coming into our facility.

We do not generate high-level waste. We do not generate some of the, you know, some of the waste issues that people have been talking about in their interventions.

This is natural uranium. This is solid waste, low-level solid waste contamination.

MR. RUITER: Excuse me, can I say that the question was --

THE PRESIDENT: You will get a chance to rebut after we finish going through the list.

MR. RUITER: Just so you know, it's going to be a thorough rebuttal.

MR. MASON: For the record, Peter Mason.

Yes, I would like to address the issue -- we've been accused of running a plant in the open -- in secrecy for 58 years. I think the very statement is, you know, really quite ridiculous.

I think the fact that we've heard, even interveners mention, that in the 1980s they knew about the plant. They visited it in the 1990s and also in this decade as well.

I think the -- it is a testament to the standard of excellence that we have run our facility over those 60 years that in actual fact it has not attracted any attention.

Intuitively we all know that if there are problems, it gets public attention. There has been no real public attention because of the excellence with which we have run that facility.

It's certainly not been secret. We've just been going about our business in the best way that we know how. So I think to accuse us of trying to run a secret operation, you know, borders on the ridiculous.

We have had the integrity of our measurements, our monitoring questioned. And yet we have seen at this hearing over the last day or so that over 60 years there's no accumulated impact in the environment around our plant, which not only substantiates the results but demonstrates that we have no impact on the environment or the community.

So I say again, we run an excellent

facility; we run it within our licence; and we believe that the public are perfectly safe around our facility.

THE PRESIDENT: Okay, over to you.

MR. RUITER: Okay. So maybe Commissioner McDill or Tolgyesi can help me with these questions from Peter Mason because, you know, I grew up in Toronto and went to school less than two kilometres away from the plant; and in Peterborough I was living one block away from General Electric, so I feel I deserve answers to these questions.

So when they say that they are insured, my question was: Who is your insurer; is the scenario that Peter Mason discussed yesterday with the derailment covered by that insurance; and how much -- what is the financial figure on liability for that insurance?

Second of all, Peter Mason -- or, sorry, Peter Elder at the CNSC said there is no requirement from the CNSC outside of the *Nuclear Liability Act*, and that would fall under a provincial question. So I'd like to call Kevin Webster of the Ministry of the Environment up here to answer that question in terms of the provincial requirements for insurance on this facility or a Class 1B facility in general.

Also, I asked about the waste. And it was a very deceptive figure I felt that was given, that 99.99 percent is used in the product, whereas there's only a little bit that's recycled and turned into waste.

I wanted to know the question in terms of the kilograms. And I'd note that in the previous oral transcripts from maybe 2000 or 2005 it was actually stated how many kilograms, and I believe the range was just shy of 7,000 kilograms. So I'd like to know what that amount is currently, the kilograms of waste that are being released by truck for recycling or waste.

And I also asked another question about the older generations of workers. Have they been studied in any meaningful way in terms of health and mortality?

I also asked for the names of the third parties that conduct the independent verifications of their emissions, because they're claiming that they're independently verified but they won't say who are doing those independent verifications of those emissions and requirements for sureties and insurance.

I also asked what was the suspected

cause of their reading of 30.9 parts per million in the soil in 2009.

THE PRESIDENT: Okay. Let's -- those are the last --

MR. RUITER: And we can start there.

THE PRESIDENT: On the 30.9, can somebody get a quick explanation? Staff?

MR. RINKER: Mike Rinker, for the record.

Maybe GE can follow-up, but this is a known area of contamination that has been in existence along the fence line where the facility borders a rail line.

There was past practice at GE of washing equipment and so on along that rail line, and there was contamination in that area.

THE PRESIDENT: So it was a one-time event that -- what is it now?

MR. RINKER: Along that same fence line the highest reading we observed in 2012 was on the order of 20 parts per million. A few years ago there was a number of 30.9, I believe.

MR. DESIRI: For the record, Paul Desiri.

All of the measurements in that area

have been below the applicable guideline of 33 parts per million.

The 30.9 and the more recent numbers in the twenties and the teens are all within a couple spots at the fence line, very well defined. It's under close scrutiny. We're watching it closely. And as Mr. Rinker mentioned, most likely attributed to a cleaning practice some years ago.

THE PRESIDENT: What's this story about the third party, the one that does -- is that really, truly confidential?

MR. DESIRI: For the record, Paul Desiri.

So the results are public. As far as publishing names of companies we deal with, we have certain limitations on when we can do.

THE PRESIDENT: Do the companies themselves object to being known? I would imagine that somebody who does measurement would like to advertise their name.

MR. DESIRI: Yeah, it's something we can take back with us and discuss. I'll defer to Peter Mason.

MR. MASON: We would have to ask their permission before we divulge their name to the

public.

THE PRESIDENT: Okay.

MR. MASON: But to your point, it might be commercially beneficial.

THE PRESIDENT: Exactly.

Commissionaires? Dr. McDill?

MEMBER McDILL: Thank you.

Yesterday Dr. Thompson spoke a bit about health in nuclear workers. My question today would be: Is there a sufficient statistical base to separate out, if it could be done, workers from this facility over time? I suspect it's hard to know. Statistical bases -- statistics are difficult.

DR. THOMPSON: Patsy Thompson, for the record.

I think the issue is with the number of workers. There's currently about 50 workers. Even if we took all of the processing facilities, facilities that process uranium and the number of workers is still very small. But, more significantly, is the doses to which they are exposed are so low that the types of analysis that could be done are limited.

We have done studies of uranium miners that include about 3,000 workers from the Port Hope conversion facility. And it's on that basis that

we're able to draw conclusions on workers that are exposed to potentially radium and uranium as the Port Hope processing facility workers were. Essentially, those studies have been published in the peer-reviewed scientific literature. The articles are available on our Web site.

And there's a recent article that's been submitted to the *Journal of Environmental Research* dealing specifically with additional work on that cohort of workers.

The information we have currently with the levels of exposure is that the worker exposure is -- on average, to internal exposures to uranium are low and in the range of what members of the public get in the high background areas, and where we don't see any changes in the rates of cancer.

THE PRESIDENT: Dr. McDill?

--- Pause

DR. THOMPSON: Perhaps -- I think I'm reading your mind now -- seriously -- and that would be a bad sign, right.

I think what would be useful for, you know, workers from GE Hitachi and members of the public is that we -- we pull together the information we have and the limitations to doing a study specifically for

GE Hitachi, for example.

But I can certainly put, you know, a document together that provides the information we do have on similar workers and members of the public in similar areas, as well as what we could potentially do with a small cohort of workers from the remaining processing facilities.

THE PRESIDENT: Would their workers be registered on the NDR, on the registry?

DR. THOMPSON: Patsy Thompson, for the record. As we mentioned yesterday, and I will ask Melanie Rickard to come up and correct me if I am wrong.

And so the -- the extremity doses and the whole body doses are being monitored by a licensed dosimetry service and those doses are being filed with the National Dose Registry.

My understanding is that the doses from uranium inhalation are not done through a licensed dosimetry service and those would not be in the NDR, which adds to the challenge, but I think Melanie can correct me if --

MS RICKARD: Melanie Rickard, for the record.

This is actually one exception where

the uranium results, the internal dosimeter results are in the NDR.

THE PRESIDENT: So how far back are they? I'm trying to -- remind me, how long has the NDR been in existence?

MS RICKARD: For a very long time now. I was going to say late '50s, early '60s. We can get an exact date for you.

THE PRESIDENT: So you may have a pretty good time series to make up for some --

MS RICKARD: Yeah, we --

THE PRESIDENT: -- at least try to track incidents?

MS RICKARD: Yeah, we'd have to look to see how far back the dosimetry records are for GE.

I also wanted to add, yesterday or the day before I said that only licensed dosimetry services submit records to the NDR. There are a couple of exceptions where agreements have been made between facilities and the NDR, and GE is an exception. So, in this case all of the records, at least the current records are represented in the NDR.

Basically, this is an historical agreement that has been made between the two -- well, between the NDR and the facilities, so --

THE PRESIDENT: So, you will undertake to do something about that?

DR. THOMPSON: Patsy Thompson, for the record.

As I mentioned, we will collect the information we have. The scientific basis on the -- our assessment that the workers are safe, and we'll look at the existing information and what we could do in terms of studies.

THE PRESIDENT: Thank you.

Anybody else?

M. Harvey.

MEMBER HARVEY: Yes. I would like to have a final answer about the total waste going out of the plant per year. I mean, instead of talking of percentage, you probably have the amount, the total amount of waste?

MR. DESIRI: Yeah. For the record, Paul Desiri.

The number of 7000 kilograms was quoted. That's not correct. It varies year-to-year. Some years it's 10 kilograms total uranium. Other years it's higher than that. But it's typically around fifty.

THE PRESIDENT: Okay. So --

MEMBER VELSHI: Can I follow up?

THE PRESIDENT: Sorry. Ms Velshi.

MEMBER VELSHI: Yeah. I don't think it was grams, I think it was kilograms of waste volumes, whether it's your protective clothing or your filters and so on, so is that what you were referring to at 10 kilograms?

MR. DESIRI: Yes. So that's the amount of uranium on the -- like, it's surface contamination on things like protective clothing.

MEMBER VELSHI: I guess a more useful number would be how much solid waste volume has been created that now needs to be managed because it is contaminated with uranium.

MR. DESIRI: Yes, for the record, Paul Desiri.

So, again, that varies year-to-year. Typically it's -- you know, it could be 10 cubic meters a year, 20 -- something like that. It's in that range.

MEMBER VELSHI: I have a question for the intervener. And I understand you have been kind of the leader in driving attention and more public concern around this, and the questions you have asked, to me, seemed all extremely reasonable. And I suspect you have been engaged with GE and the CNSC staff over the

last couple of years around this, and have probably gone to the open houses and whatever the forums have been, there.

So, have these questions not been answered before, for you? And I'm just wondering why it would take a forum like this to have these concerns addressed?

MR. RUITER: Thank you very much, Commissioner Velshi, for asking that question.

General Electric is not forthcoming with their information. They pretty much ignore my emails or they answer back they have already asked their independent third parties and they did say that we don't have permission from those independent third parties.

I don't know how the -- like, you've just seen the GE Hitachi answer some questions, and they actually have not really directly answered the questions, as you have just seen right now. So, I'm very happy that we have this forum, but you know I don't believe that the Commission should accept, nor the public should accept that they have independent third party monitoring of their emissions if that independent third party for some reason does not give permission to GE to disclose their name. It's -- that

was a simple question.

The other simple question was, does the scenario described by Peter Mason, CEO, GE Hitachi, of a derailment and explosion, is that covered by their insurance? What is the name of the insurer? What is the financial liability that goes with such a worst case scenario?

And then, again, from the CNSC staff from Peter Elder, or please call up Kevin Webster because he deferred to provincial regulations for that, and we luckily do have the MOE here today, and the MOE has not been very cooperative, either. So, you know -- you know, maybe if I could open some dialogue with some of the Commissioners here -- I do work on this full-time and I do, you know, get a lack of answers from your staff at the Commission, from General Electric Hitachi, and other responsible -- other responsible authorities like Toronto Public Health, who are maybe too afraid to investigate this. So, -- and also from Patsy Thompson just now.

The question was, you know, I'm wanting to know what are the former workers, the older generation of workers from this plant, what do they die from? Has there been any meaningful study --

THE PRESIDENT: We --

MR. RUITER: No, I'm not done.

THE PRESIDENT: Okay, we have dealt with this.

MR. RUITER: No, no, no, no. She didn't --

THE PRESIDENT: Please, you got an answer and we are going to --

MR. RUITER: Excuse me, Commission McDill, can you help me out here?

I was asking if they have been studying those workers for the health and mortality, and I heard that there were workers studied at other plants. So, in effect, the answer is no. So, you know, these were very reasonable questions as Commissioner Velshi has put it, there. And I think that because it has been, you know, three years since I came to the Commission in 2010 that -- that I can get these answers, because I don't want to have to wait until the next time we're here in a forum like this. So, let's get these answers out now, please.

And, did we get the amount of kilograms of waste, of solid waste?

THE PRESIDENT: Okay, we just --

MR. RUITER: Did we even get that figure from Paul?

THE PRESIDENT: Yes.

MEMBER VELSHI: I think we did, yeah.

MR. RUITER: What was the figure?

MEMBER VELSHI: He said it was 10 to 20 cubic meters a year, or it varies.

MR. RUITER: And cubic meters, how many kilograms is that?

THE PRESIDENT: Somebody will do the math for you.

MR. DESIRI: For the record, Paul Desiri.

I did say the answer just a few minutes ago. It varies year-to-year. You know, in low years it could be 10 kilograms. High years it could be 100 kilograms.

THE PRESIDENT: Okay, Mr. Jammal, the last word, please.

MR. JAMMAL: Ramzi Jammal, for the record.

The intervener which was up last was asking the question with respect to insurance. I'll leave the business contractual between the licensee and MOE and whatever-have-you.

However, I do not want anyone to leave this room not recognizing if there is an accident,

the cleanup will have to be done according to CNSC requirements. And the Commission has the powers of issuing orders to anybody to clean up at their expense -- at their expense, insurance or not, to the requirements of the CNSC. So, I do not want anyone to leave -- The fact of insurance or not, the Commission has the powers to issue an emergency order to GE Hitachi or any company to come and clean up at their expense and render the site according to our requirements.

THE PRESIDENT: Thank you, that's very useful.

Anybody else have a final question?
We've got to move on.

Mr. Tolgyesi?

MEMBER TOLGYESI: Yes, I have two short ones. One on page 2 of the intervener's presentation before the last paragraph he's stating that cancer rates have escalated in northern Saskatchewan since the uranium mine was opened.

Staff, could you comment?

DR. THOMPSON: Patsy Thompspon, for the record.

Mr. Tolgyesi, if we could, I can come back after the break with a response. I don't have

that information with me.

MEMBER TOLGYESI: And the second one is you are talking about third party sampling. There was a Minister OF Environment sampling quite recently. And there was a presentation and statements also of Toronto Health Authorities on the risks. These are third parties, independent parties. They are belonging to the government or to Toronto authorities and they were stating what's the situation.

Does it answer to your question, it's a third party, it's independent.

MR. RUITER: Well, thank you for the question. There will be other interveners following me who will do a better synthesis of some of the discrepancies and the methodology in the ways of testing the soil, such as geographically averaging the results when we are actually looking for what the problems may be, and that may suppress the information. But I don't think that, you know, one third party, the Ministry Of Environment soil study, which has a lot of issues, can in any way be scientifically said is a comprehensive measure of this plant. And, this plant does say that they have independent third parties that monitor their emissions. So, I'm assuming, you know, measuring alpha in the stacks with, you know, a moving

current of wind -- and we don't know how they are measuring. I'm assuming -- they also said that independent third parties monitor their soil.

So, that was the information that I was asking, and I still haven't got an answer for that, and I thank Commissioner Binder for you know, asking that question, who are these third parties? Have you asked them?

And what we're missing here is the sub-text, is, that if they are claiming that they have independent third parties that monitor their emissions, and they have said they have that, but they are claiming that they need to protect the privacy of that independent third party, something doesn't comply there. And, it looks like their being deceptive. So in the interests of truth and getting the truth out, and public information and community knowledge, we need the answer to that question.

I don't know why the Commission is satisfied that they have avoided giving me an answer on who is the insurer? That's a reasonable question.

Who is -- and you know we -- it's not that we don't have time for this --

THE PRESIDENT: We --

MR. RUITER: No, sorry, let me

finish.

THE PRESIDENT: No --

MR. RUITER: It's not that we don't have time for this.

THE PRESIDENT: Don't repeat the question, please, okay?

MR. RUITER: But can I get an answer to that question?

THE PRESIDENT: You will get it. They undertook to find out who the third party -- they have to have a commercial -- there was a commercial business here. I just object to the fact that the MOE is not viewed as a third part independent, so is the -- the Toronto Board of Health, and so is CNSC studies. You've got three studies in there, which were done independently.

You have read the studies, you don't like the studies. That's a different issue.

MR. RUITER: But then why -- why withhold the information on their emissions monitoring third parties?

THE PRESIDENT: They will get back to us on the third party, okay.

MR. RUITER: Okay. But they can get back to you right now on the -- on the -- who is the

insurer, what is the amount of insurance and is that -- is that scenario covered.

THE PRESIDENT: Can you --

MR. RUITER: That's a fair question, please.

THE PRESIDENT: Can you share with us now your final remarks, and we've got to move on.

MR. RUITER: It's not final remark time. That question has gone unanswered.

MEMBER McDILL: Can we go back to staff one more time?

MR. ELDER: Just -- just one thing I want to come back in, as I said, one of the interventions we dealt with last night was from McMaster University who said that they do the monitoring of the air emissions around the site. So, it's on the public record who does the air emissions.

MR. RUITER: Would that be the external monitors or the stack?

THE PRESIDENT: Again, we didn't make -- we didn't make the connection.

MR. ELDER: Well, even their -- they said what they review. You can look at it, it's in their intervention.

MR. RUITER: As Commissioner McDill

mentioned, that intervention mentioned very, very little, as people who work in public health, and interested in science, there's no data there. There's nothing to support that. There's nothing we can use to find out if -- to find out what are these levels. Like, we have a right to know this. The Commission is here to help us find this information and I'm hearing a lot of resistance to that. And as much information as we can get -- so I don't see why, you know, theoretically a nuclear proponent should think that increased transparency is in their interest, and in the common interests of the community, so why can't we have these independent third party report? Why can't we? Can we have the reports from McMaster?

But you're giving me -- you're giving me, you know, holes in your information. So, you're saying McMaster might be monitoring the exterior monitoring stations. But that still leaves the question of the alpha emissions monitoring in the stack, and the releases to the sewer. And who is the independent third party that monitors that? And I have a right to know that, and I think the Commission should -- should -- like, because that's data that they have used and we have a right to that data retroactively as well.

Also, can we get the MOE up here?

Peter Elder deferred --

THE PRESIDENT: Okay, can you stop?
There are twenty more interveners and we don't have
time for --

MR. RUITER: Do the interveners mind
if the Commission answers my questions?

--- Shouting from audience

AUDIENCE MEMBER: Let's go. Let's
go.

MR. RUITER: Thank you.

AUDIENCE MEMBER: We want to put
it --

AUDIENCE MEMBER: What are you
hiding?

AUDIENCE MEMBER: We can all wait.

AUDIENCE MEMBER: We got that all our
lives.

--- Shouting from audience

THE PRESIDENT: I would like to move
on. I would like to move on to the next presentation.

AUDIENCE MEMBER: No.

AUDIENCE MEMBER: No.

AUDIENCE MEMBER: Answer the
question.

AUDIENCE MEMBER: Answer the question.

MR. MOZ-CEDILLOS-RODAS: I'm next. You can go ahead.

--- Clapping and shouting

MR. RUITER: If you don't remember, the question was: Who is their insurer? What is their amount that they are insured for? And, is the scenario that Peter Mason described yesterday for the record in these hearings, is that scenario covered by that insurance?

THE PRESIDENT: You will not get the answer now.

MR. RUITER: Why not?

AUDIENCE MEMBER: Yes.

--- Shouting and noise making

THE PRESIDENT: Because they have to go and check with their commercial, if you like, third party for getting permission to release information.

MR. RUITER: They can't -- they don't know the name of their insurer? They can't release the name of their insurer?

THE PRESIDENT: Not if they have a business relationship with those people. It's against confidentiality.

MR. RUITER: How is that confidential? Then you can't prove to me that they have insurance.

--- Shouting by members of the audience

THE PRESIDENT: Can you -- can you now please let us move on to the next submission?

MR. RUITER: No. I need a follow-up by Kevin Webster and Chris from the Ministry of Environment because Peter Elder said there's no -- okay, so, first of all, they will not tell us who their insurer is, and the Commission has seen that, for the record.

Second of all, Peter Elder, the Directorate of the CNSC, has said that outside of the *Nuclear Liability Act* there is no CNSC or federal requirement for their insurance. And there is a requirement under the Ministry of Environment. We are here today to discuss the safety of this plant. Insurance is pivotal to the safety of this plant.

AUDIENCE MEMBER: Do you want my house?

MR. RUITER: So, I am a Torontonionian. You will answer my questions. You have the MOE here. You should have their third parties here to verify the information. You should have the insurer here so that

they an answer those questions as well.

--- Applause / Applaudissements

MR. RUITER: But we do have the MOE here today. We do have the MOE here today.

--- Applause / Applaudissements

MR. RUITER: And they can come and answer the question where Peter Elder's knowledge has lacked.

THE PRESIDENT: MOE does not deal with insurance issues.

MR. RUITER: Then, so are you saying that Peter Elder is wrong?

THE PRESIDENT: In the insurance --

MR. ELDER: Can I clarify because it's going back and -- it didn't say it was Ministry of Environment, it says provincial -- it's the provincial corporate rules, okay.

Every corporation licensed in -- that's in Ontario must have liability insurance. It's not about the environment, this is for worker health and safety, anything associated with those facilities. So, there is a requirement that they carry liability insurance.

MR. RUITER: What is the requirement and what is the amount, and what is the requirement for

what's covered? And is that accident scenario covered under that?

THE PRESIDENT: Mr. Mason?

MR. RUITER: We're here to discuss GE Hitachi. We should get the answers.

THE PRESIDENT: Okay, will you let somebody else speak.

Mr. Mason?

--- Shouting from audience

MR. MASON: Mr. President, for the record, Peter Mason.

I think -- I think Zack here is making a mountain out of a mole hill. We will take as an action item to get permission to disclose the -- the name of our third party.

As Mr. Desiri has said earlier, all of the results that a third party provides us with are made public.

MR. RUITER: Until you can tell me who that is, we can't believe you on that. And you've heard that people don't trust you, Peter.

MR. MASON: Listen --

MR. RUITER: So, tell us. Like, do you not see the dissonance or the cognitive dissonance in what you're saying, that: Trust us, the results

were fine, but we can't tell you who the results were from. How does the Commission sitting up here accept that?

How does the Commission accept that?

MR. MASON: Mr. President, as I was saying, we will take as an action item to get permission from that third party to disclose their name.

And with regard to the insurance --
--- Shouting from audience

MR. MASON: With regard to the insurance, we will also take as an action item that I will obtain permission to provide the information, the name of the insurer and to the amount that we are insured for.

MR. RUITER: In the absence of this information right now --

MR. MASON: At this point in time, I cannot disclose that without permission from my principals.

MR. RUITER: If you cannot disclose that information and you've come to this hearing with three years of preparation to come back here and speak about this, if you can't disclose that now, then how does the Commission even accept that information?

Doesn't the Commission have to check who that is?

Does the Commission not know themselves who the insurer is, who the independent third party verifications are?

And, in the absence of that information, I think that the Commission needs to tell them that any of their assurances of safety in this matter cannot be accepted by the Commission nor the public in the name of nuclear community safety until GE can actually, at the very least, release the names, the amount -- I don't see how the amount is anything proprietary. And I still don't see why even without the name of the insurer that GE cannot tell me if that accident scenario described by Peter Mason is covered by insurance.

And, you know what, like, I'm going to ask the Commission today that they need to suspend their licence, because there I a stockpile, until we can get the answer to that question. So, if it is going to take you a day --

--- Shouting from the audience

MR. RUITER: -- it's going to take you a day. This is the only thing that will actually give an impetus for General Electric Hitachi to get these questions answered is if you suspend their

operation today, and you have --

THE PRESIDENT: We will now take --

MR. RUITER: And you have the ability
to do that.

THE PRESIDENT: -- a ten minute
break.

MR. RUITER: No. No, you will not.

--- Shouting from audience

MR. RUITER: No, you will not. I
will return --

--- Upon recessing at 10:11 a.m. /

Suspension à 10 h 11

--- Upon resuming at 10:43 a.m. /

Reprise à 10 h 43

THE PRESIDENT: Okay. I understand,
Mr. Ruiter, that you would like to make a statement.

MR. RUITER: Yes. I would like the
record to show and I'd like the Commission to
acknowledge that we didn't get an answer to this
question and that I'd like the Commission to undertake
to get me answers to these questions:

Who is your insurer? What is the
amount of your insurance coverage? And is the scenario

described by Peter Mason yesterday covered by that insurance?

I'd like the Commission to undertake and order General Electric to attempt to get us the answer to this question within an hour and that the information -- that once you have the information, I can come up here and you can present that information to me before the end of the day so that when they give us that information we could potentially move on from that.

You know, they have phones, they have cell phones, they're a highly connected company. If we can get them to get us the answer to those questions within an hour, that if there is no permission from that independent third party or no permission from the insurer to answer that question, then I'm going to want the Commission to acknowledge that and order them to get a new insurer that they can say the answer who that insurer is.

And in the absence of permission from their insurer, I think the most reasonable thing to do for everyone's common interest here, the Commission, the proponent, the CNSC staff, the Commission, the responsible authorities and the community members, the responsible thing here to do is just to merely suspend

their operating licence, even if it's for an hour, until we get that information or even if it's for a day or a month or indefinitely, that we suspend that operating licence because I think the Commission would agree that is absolutely vital for the public's, you know, knowledge of who their insurer is and what they're covered by. And if we can't have the information, they shouldn't be in operation.

So I would like the Commission to acknowledge they will attempt to get this information for me within an hour on their cell phones or their computers. They're a big company and, you know, they say they're quick on accident response, so they can get this information quickly, and this is this the occasion to give us this information.

So I'd like the Commission to acknowledge that. It's a reasonable request. This is our meeting. We are the public. You're the public too. Get that acknowledgment that we will get that information within an hour.

And also, please acknowledge that without this information, if the insurer is not willing to reveal who they are and GE is not willing to reveal what they are covered for in the worst-case scenario and how much they are covered for, then we'll merely

suspend the operating licence until we can reconvene and they've found a new insurer or they've gotten permission from that insurer to actually reassure the public that they do have insurance. And I don't want that answer by email.

We need to reconvene hopefully actually a bit closer to the plant so more members of the community can come out, because being by the 401 and not near the plant, as Andrew Cash requested this meeting be, seems like drive-by regulation. So I'm not letting you guys drive by. You're going to get to know this community and you're going to work with us.

So I will put it back to -- can I speak -- is it unreasonable to ask --

THE PRESIDENT: Can you complete your statement please?

MR. RUITER: Well, these are questions and then I have one tiny final statement.

So is this reasonable? Can we get each Commissioner to weigh in on this very important issue to this community?

THE PRESIDENT: Can I ask GE to comment on this one-hour request?

MR. DESIRI: For the record, Paul Desiri.

So part of his question is: Is the scenario covered that was discussed with respect to rail? The answer is yes, it is covered. I've said that a couple of times previously. I'll say it again: It's covered.

Secondly, as far as the name of the insurer, that's something we need to discuss with the company. It's a commercial arrangement. We have to read the contract. And then we'll get back to the Commission.

MR. RUITER: Within an hour please.

MR. DESIRI: And the third question about third parties, I just want to say that we do numerous measurements: environmental measurements, plant measurements. The amount of data we have is enormous. We have many verifications of data, many different third parties.

One of the third parties has already been discussed. It's McMaster University, that's no secret.

The other one is a commercial company. We need to talk to them, get their permission.

I will restate that the results are published. They are in the public domain. So it's

just a matter of whether the name can be released or not and that's an action for us.

MR. RUITER: And the amount, Paul, the amount of that insurance liability for that unlikely scenario?

MR. DESIRI: For the record, Paul Desiri.

So that's again a commercial issue. That's something we need to discuss with our insurers. Thank you.

MR. RUITER: No, that's not -- we need to know the amount of your insurance.

And he said he would discuss that with the insurer. You all know that with modern technology that we have at our disposal and you all know that they needed to have come here preparing for these hearings -- they have not come prepared for these hearings but they can contact that party today. We are -- this is between Monday and Friday, 9:00 to 5:00. We're still in the morning right now. They have a lot of time to find that.

So is it reasonable to get the Commission to instruct the proponent to phone their insurer, come up with an answer and give me that answer so I can come back up here within an hour if they have

the answer or not and we can take it from there?

THE PRESIDENT: Okay. Look, this is a meeting. What the Commission does is listen to all inputs and we will take it under consideration and we will act whenever we think acting is required.

MR. RUITER: You don't think acting is required?

THE PRESIDENT: Now -- now, GE --

MR. RUITER: You don't think you can get the answer?

THE PRESIDENT: Can you let me finish? I listened to you. Listen to me.

MR. RUITER: Okay. Then you will listen to me and you will let me finish.

THE PRESIDENT: Will you listen?
We now heard, GE Hitachi agreed, committed to come back, and we will make sure that they do come back.

The point that has to be told is to understand that we -- the CNSC is responsible to make sure that, no matter what happens, the company itself is responsible for any cleanup, any liabilities associated with an accident, for example.

The fact that they are deemed to be a low-risk enterprise means they are not covered under

the nuclear liability and their insurance is a private sector insurance. Regardless of that insurance, the CNSC will absolutely make sure that whatever happens they are responsible and liable to any accident.

We will encourage them to follow up and disclose as much as they can any of the insurance commercial arrangements that they've entertained, including the sum, including everything like that. We will actually commit to actually trying to do that.

We are not sure and we cannot instruct them to come back to us in one hour to do this and we're definitely not going to suspend the licence in one hour.

So all I'm trying to ask you to do is to complete your statement, let us do our job, which means that we take all the input from all the remaining intervenors under advisement and then we'll react.

MR. RUITER: Okay. So I have a few questions here. You're going to please listen to me and please answer.

When can we get that information by? Why can we not get that simple answer within an hour? Why can't we get that answer within an hour? You said you'll get the answer. I need a firm commitment for when.

And you said that GE will come back and give that answer. Will GE be able to give that answer over email, which is unaccountable, or do they have to come back in front of the Commission so that we can have day 4 of these hearings at the Holiday Inn Yorkdale or actually preferably closer to the plant so more people from this community can take part?

So before I make my very final statement time, I ask you very specifically a direct question on your statements here, which I'm taking in good faith, in terms of when, why we can't get them to get that answer for us within an hour, when we can get that, and if it's going to take longer than an hour, you said they're going to come back.

Can I hold you to your word that they're going to come back and you'll come back and you can present the answer to us face-to-face in the community? I think that's -- I think that's reasonable, you know.

THE PRESIDENT: GE, how much time do you think you need to actually figure out or be told or get approval for disclosure of this information?

MR. MASON: Mr. President, for the record, Peter Mason.

Just a comment first.

I think as far as the amount is concerned, I think that everyone should get some comfort from the fact that the worst-case scenarios are evaluated by our insurance company, independent of us. Obviously, an insurance company would want to ensure that they know what they're insuring and so they evaluate worst-case scenarios for the plant, they evaluate all of our data, and that is in some ways a third party evaluation because they're putting their money on the line.

In terms of obtaining permission to disclose that proprietary information, to be quite honest, I cannot give you a specific time, within an hour or something like that, because I don't know who's going to be available and who is not.

I would say a 24-hour period, we would be able to achieve that.

THE PRESIDENT: Okay. And you will send an email to us and we distribute it or something of that nature?

MR. RUITER: Okay.

MR. MASON: For the record, Peter Mason.

We will send you by email a formal letter from GE.

THE PRESIDENT: Thank you.

Okay, final statement please.

MR. RUITER: First, I just want to say I need some clarifications on that.

For the record, it's 10:55. We're going to get that answer within 24 hours and you said that GE will come back and give us that answer.

THE PRESIDENT: Come back meant an email explaining what's going on.

MR. RUITER: Meant -- you know what, Ms Velshi asked a really good-natured question. You know, you've been doing this for two years. You thought you might have gotten the information. We've asked these questions time and time again and they have not given us the answers. So we have the Commission in front of us right now. We haven't waited two years to come here and get more -- you know, get more intentions or get more promises that we will get information at a later date.

We still have the matter of them asking permission from all the third parties that monitor their emissions.

We still also have -- we need an undertaking from our representatives here at the Ministry of the Environment to also, within an hour if

they can --

THE PRESIDENT: Can you please make your statement so we can move on?

MR. RUITER: Yeah. Okay.

THE PRESIDENT: We're running out of time.

MR. RUITER: Okay. We're running out of time more than two bloody days, I guess. Okay.

So my final statement is that in terms of accident preparedness there was a flood in Peterborough in the mid-2000s and then they told you in 2010 that they were going to upgrade their flood plans. Yet, this summer, on July 8th, 2013, there was a flood and as a result there was a station-wide blackout for the period of something like three hours, and this is posted on the CNSC website.

So that points out to saying they're going to do something and not actually doing it, because had they actually prepared or put in place coherent flood plans they wouldn't have had a station-wide blackout.

And I'm never going to get a question without knowing who these third parties are that monitor their emissions, how those emissions monitoring systems were affected in those three hours.

Furthermore, if you look on CTV and the "Peterborough Examiner," you will see that in March 2011 there was a GE Hitachi Canada employee or employees who were working in the Fukushima Daiichi General Electric Nuclear Power Station at the time the tsunami hit and they were given a hero's welcome. There was a motorcade that picked them up. Dan Ayotte gave an interview to CTV and said that they had been working in the Fukushima Daiichi Nuclear Power Plant since like the late nineties.

So this is actually a very recent example of General Electric Hitachi leaving the scene of an accident. So this is how they've acted in the past, this is how they're continuing to act and it points to how they're going to act in the future.

So this underscores that you're running out of time but there is an urgency to these questions that needs to be respected by the Commission, and allowing them to get back in 24 hours and not with whatever answer they can get to the best of their ability within an hour is letting them off the hook. But for now, I'm going to leave it to my fellow intervenors to pick up directly where I left off.

But also, I'm just going to say: Can we get GE to say they're going to at least try to get

an answer within an hour? I know they have Kim Warburton and Rahim from Communications here with very good communication technology. Can we get them to agree to attempt to get us that answer within an hour?

And that's my last question and that's it. Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Can you answer that?

MR. DESIRI: For the record, Paul Desiri.

Before I answer that question, I just want to take an earlier statement by Mr. Ruiter, who said that we're not responsive. We have a target of responding to all our e-mail, our web inquiries, our phone calls within 24 hours. It's not always possible, but that's our target.

I just want to read a comment posted on Facebook by Mr. Ruiter about our response.

MR. RUITER: Are you going to be my Facebook friend, Paul?

--- Laughter / Rires

MR. DESIRI: "Got a reply from GE..."

UNIDENTIFIED SPEAKER: (Off microphone) -- on your Facebook?

MR. DESIRI:

"Got a reply from GE the next morning, that was a fast reply. Thanks GE, big ups for the speedy response." (As read)

UNIDENTIFIED SPEAKER: There's one.

UNIDENTIFIED SPEAKER: He posted it because he --

UNIDENTIFIED SPEAKER: Yeah.

MR. RUITER: There's one. Thank you.

MR. DESIRI: Yes.

MR. RUITER: There's one. And I am encouraging -- this is evidence that I am actually encouraging the proponent to be transparent.

--- Laughter / Rires

THE PRESIDENT: Okay. Okay. Thank you.

MR. RUITER: No, the question was: Will they attempt -- will they at least try, for the benefit of us, for the public, the benefit of the public, the benefit of the Commission, for the benefit of transparency --

THE PRESIDENT: Okay, very last --

MR. RUITER: -- will they attempt within an hour to get that information? Will they at least make the attempt?

MR. DESIRI: For the record, Paul Desiri.

We will do it as soon as we can and we will do it within 24 hours.

MR. RUITER: Sorry --

THE PRESIDENT: Thank you. So can we move on to the next presenter? There is a need to give some time to the next presenters, please. Thank you.

--- Applause / Applaudissements

--- Off-record discussion / discussion officieuse

THE PRESIDENT: The next presentation is from Mr. Mauricio Moz-Cedillos-Rodas -- excuse me for the pronunciation -- as outlined in CMD 13-M51.52. Please proceed.

13-M51.52

Oral presentation by Mauricio Moz-Cedillos-Rodas

MR. MOZ-CEDILLOS-RODAS: Good morning to all present. Thank you all for being here.

I am sorry, please forgive me, I love you, thank you, Sister; I am sorry, please forgive me, I love you, thank you, Brother; I am sorry, please forgive me, I love you, thank you, Sister; I am sorry, please forgive me, I love you, thank you, Brother; I am

sorry, please forgive me, I love you, thank you,
Brother; I am sorry, please forgive me, I love you,
thank you, Brother; I am sorry, please forgive me, I
love you, thank you, Sister; I am sorry, please forgive
me, I love you, thank you, Brother.

Within my allotted time, if we would
all like to release some tension by making a funny face
or making a sound, laughing out loud, it is a moment
that brings great tension, but I'm very, very, very,
very thankful that we are all here.

My family knows me as Mauricio. I am
a war refugee, lived through the war in El Salvador,
thus I know what a different civil understanding is and
I am very thankful that we are all here, thankful for
the peace officers, for all of you, we are all
colleagues here.

We all breathe together. There is no
patent on air, air does not stop at the borders,
neither does water. I do not envy the position that
you are in, let me tell you. I am not here to judge, I
am here with an open heart and seeing how we can help
each other. So anything that I say, please know that
I'm not doing it as a personal attack, it is just to
point some things out. That is first and foremost.

I tell you I'm not perfect, I stopped

drinking within the last year, not that I was a heavy alcoholic, but seeing our present Mayor in his stupor, I have been there, I feel sympathy for the man. I do not laugh at what he is going through.

--- Applause / Applaudissements

MR. MOZ-CEDILLOS-RODAS: I am sure that your evenings or your moments of quietude are sometimes filled with some of the interactions that you have, because you are human, you are made of flesh and emotion.

I live but a leisurely 10-minute bike ride from the death rock processing plant as the Elders have let us know of its nature.

I would like to repeat that I'm sharing from the heart and apply some context for the record about our present living condition. We are natural women and men interdependent on our mother ecosystem. We drink of her, we breathe of her, we eat of her. Our responsibility and allegiance is to maintaining a thriving symbiotic relationship with our Mother ecosystem -- Mother ecosystem.

Yet we depend on our Mother, but she is not dependent on us. She is natural, we are natural.

Canada is a Corporation. It is a

mental concept, it exists on paper. If the Corporation of Canada were to be defunct by the time I cease speaking and its symbolic representation in the flag and the emblem behind you were not to be here any longer, we still would. We would be here together, we would still have to deal with each other. We are in this together, that's all there is to it. There is no way of getting around it.

I have been checking around for free UFO rides to other planets, there doesn't seem to be. We are all within an enclosed ecosystem, Mother, Mother, Mother, within our Mother ecosystem.

The Corporation does not drink, breathe or eat. It is not of the natural world. It arbitrarily feeds on money which can arbitrarily be turned off, its power be turned off, at any time as exemplified by what's happening to (indiscernible) and some other countries at times.

Could it happen that this Corporation of Canada be made defunct quickly? Sure. The way that the Corporation of Canada is behaving around the world, it's not very safe, it's not very sane. If this money is created arbitrarily in the imaginary world, in a petri dish or a sandbox, if you will, yet through force, imposition, coercion and colonization both of

land, mind and soul, this corporate entity migrates into the natural world through trick, violence and spectacle by enslaving many of us and using us as agents to its violent psychopathic regime. Violent psychopathic, murderous is how the character of the Corporation would be qualified; cancerous and murderous.

Yet it has invaded the natural world, so this cancerous and murderous concept goes beyond the mind and comes into the natural world. It is cancerous and deadly. The Mother, our Mother Buddha Mamma(ph). Her ecosystem is enclosed, it is not a videogame in which you can start over at whim.

Our preparation has to be inclusive, our living has to be inclusive of the delicate web of life. The presumption that the present economic and social organization is the end-all of everything is suicidal.

Money and profit margins are not real, but we are. Money can be burned, money can be agreed upon of not having any value, any further, but that is not the concept with us, that is not the reality with us. Lakes are real.

I am here to speak for the beavers, for the dragonflies, for the birds, for all those that

are also affected by this murderous regime that is forcefully impressed upon us and in great kind through the use of uranium and nuclear energy. We are here to be stewards to each other's well-being.

Like I mentioned earlier, I am not perfect. Maybe you can consider that, what you're engaged in is the step of stewarding this out of useful existence, stewarding it out of use. It just does not make sense that we will continually keep on using, depending upon something that poisons us.

Hiroshima, Fukushima, if anything has happened in between that in the supposed positive, it hasn't been worth it, it just has not been worth it. This step goes a little bit beyond just cutting down some trees and then maybe working hard on reforesting.

As you all are more technically knowledgeable of, uranium hangs around a bit more. This thing is not just turn off/turn off, it is beyond us. You see, we are natural, the Corporation is not. The Corporation is only concerned about its living, it's not of the natural cycle and lifecycle, but it imposes itself upon us. We can come out of that just by being humble, active.

I present myself as a Brother to you all, however I can help. I know it's a bottleneck, I

know there is bureaucracy, I know it's not just your decision in this, there is a whole system in place to oppress us, but we can and we must. This is not a question of maybe, no, no, no, no. No, no, no, no. Who is going to go swimming around Fukushima?

THE PRESIDENT: Can you please finish your presentation?

UNIDENTIFIED SPEAKER: Let him finish.

UNIDENTIFIED SPEAKER: Let him finish, (off mic) respect.

UNIDENTIFIED SPEAKER: He's a poet. He's a poet.

MR. MOZ-CEDILLOS-RODAS: None of us are going to go swim around Fukushima, those of us that know how dangerous it is. And sometimes this danger is passed on as, you know, we see by other industries that are in decline or maybe totally outlawed here or in other nations but are yet still promoted, such as the case of asbestos.

We have known for a while that it is not nice to us, yet it's promoted. It's okay to allow ourselves, to allow yourselves where you stand to ask us how, or to let us know, hey, there's this bottleneck here within the bureaucracy.

This is what we need right now, this much support in this manner, be it from the people that live around the plant, the processes, the death rock -- and I failed to say residents, because to further bring us into some common understanding, the word 'resident' is usually applied to those that live somewhere, but it's root actually comes from residing, from being dead, being non-mobile, not being a living entity.

By adopting and by living within that frame of the Corporation of Canada makes us both a corporation and tries to detach itself from responsibility. So we are not residents, we are people that live. I am mobile, I am not a cyborg, neither are you, I hope, or I presume. Or maybe not hope if you are, it's all good.

THE PRESIDENT: Okay. Could you please finish, we have to move on.

MR. MOZ-CEDILLOS-RODAS: Yes, sir.

UNIDENTIFIED SPEAKER: Finish.

MR. MOZ-CEDILLOS-RODAS: Well, it takes time to build things, it takes time to bring down things. Your responsibility -- and now, please, if you are to remain working with the organization that you are working in -- is to make sure that this stops, that this ceases.

There is no question right now to you, it may just seem as maybe -- not a few -- it may not seem as though it is mass opinion that brings this forth, but you will soon find that it is. These corporations are quickly being defrocked in many a manner throughout the world.

Please be of the wave that allows us to be stewards to each other's kind existence. And it's not just about ties and about humans, this is about rivers, about nations that have already been destroyed up North Saskatchewan, that continually --

THE PRESIDENT: Okay. Okay. That's it. Could you please --

MR. MOZ-CEDILLOS-RODAS: -- that are continually destroyed --

THE PRESIDENT: Okay, can you shut off the microphone, please?

MR. MOZ-CEDILLOS-RODAS: -- the mics, they're on. Because --

UNIDENTIFIED SPEAKER: We would like to hear him talk.

THE PRESIDENT: I don't care what -- we have heard enough. It's 10 minutes and we have --

MR. MOZ-CEDILLOS-RODAS: I don't think you have, sir. My whole point is about --

THE PRESIDENT: Excuse me, we -- I said at the beginning --

MR. MOZ-CEDILLOS-RODAS: Yes, sir.

THE PRESIDENT: -- we have allotted enough time to have a dialogue, not a one-way discussion here, and you are not --

UNIDENTIFIED SPEAKER: (off mic)

MR. MOZ-CEDILLOS-RODAS: You can speak --

UNIDENTIFIED SPEAKER: (Off microphone) It's not a one-way discussion.

THE PRESIDENT: You are not allowing us to ask you any questions.

UNIDENTIFIED SPEAKER: (Off microphone) the people right now.

MR. MOZ-CEDILLOS-RODAS: Please, go ahead.

THE PRESIDENT: Well, then stop and allow us to see if there's any questions for you.

MR. MOZ-CEDILLOS-RODAS: Finally, sir, I (off microphone) the objection.

THE PRESIDENT: Any Commissioners have any questions to this individual, to the intervener?

Thank you very much for your

intervention.

MR. MOZ-CEDILLOS-RODAS: No, no, no,
no, no.

UNIDENTIFIED SPEAKER: We would like
to hear more.

MR. MOZ-CEDILLOS-RODAS: No, (off
microphone).

UNIDENTIFIED SPEAKER: He is (off
microphone)

THE PRESIDENT: You are not on the
podium so please stay out of this. And now, in fact, I
would like to move on --

MR. MOZ-CEDILLOS-RODAS: Could I have
just one last (off microphone)?

UNIDENTIFIED SPEAKER: Yes, we want
to hear -- one more sentence to go. We want to hear
him.

UNIDENTIFIED SPEAKER: Yes, we want
to hear him.

MR. MOZ-CEDILLOS-RODAS: We are
accountable --

UNIDENTIFIED SPEAKER: Yes, we want
to hear him.

UNIDENTIFIED SPEAKER: If it's
bottom-line dollars and cents, we --

MR. MOZ-CEDILLOS-RODAS: We are accountable to something greater -- greater --
--- (off mic)

MR. MOZ-CEDILLOS-RODAS: You are responsible in your dreams, in this life and in your next life and your children, they are responsible for your actions.

THE PRESIDENT: Thank you.

MR. MOZ-CEDILLOS-RODAS: It's not just something you can walk away from.

UNIDENTIFIED SPEAKER: Thank you.

THE PRESIDENT: Thank you very much for this observation.

MR. MOZ-CEDILLOS-RODAS: The Corporation must sustain them.

THE PRESIDENT: Security, please.
--- Applause / Applaudissements

MR. MOZ-CEDILLOS-RODAS: And I would like to --

UNIDENTIFIED SPEAKER: Leave him alone!

--- Applause / Applaudissements

THE PRESIDENT: Security, please.
--- Applause / Applaudissements

MR. MOZ-CEDILLOS-RODAS: You're

flesh, corporations are not. You're the water.

--- Applause / Applaudissements

MR. MOZ-CEDILLOS-RODAS: You are the water. Water is power, thank you.

--- Off record / Discussion officieuse

MR. MOZ-CEDILLOS-RODAS: Kids are going to die like this because, like that.

UNIDENTIFIED SPEAKER: (Off microphone).

THE PRESIDENT: The next submission is an oral submission from Ms Carrie Lester, as outlined in CMD 13-M51.53.

Ms Lester, we have read your submission, you have 10 minutes.

13-M51.53

Oral presentation by Carrie Lester

MR. LESTER: You're getting a little feisty. Relax. Have a drink of water.

I would like to thank -- oh, greetings everybody.

--- Native language spoken / Langue autochtone parlée

To the Members of the Nuclear Safety Commission, to the staff of GE-Hitachi, to the people

here in this room, to the real people in this room, to the media and to the community which surrounds and is affected by the GE-Hitachi uranium fuel processing plant at 1025 Lansdowne Avenue, including the aquatic, terrestrial and air-dwelling community members.

I want to thank also a good friend, Mauricio, Boom-Boom, for being real and honest and being a poet.

--- Applause / Applaudissement

UNIDENTIFIED SPEAKER: Mauricio!

Bravo!

--- Applause / Applaudissements

MS LESTER: And I want to thank -- I forget his name, the man from Port Hope --

UNIDENTIFIED SPEAKER: Dan.

MS LESTER: -- Dan Rudka for having the courage to come up here and speak to you when you would not address his issues.

So I would like to acknowledge the land that we are standing on today. This is traditional Iroquoian land, the Haudenosaunee people, people of the Longhouse.

--- Applause / Applaudissements

MS LESTER: We have lived here for thousands of years.

--- Native language spoken / Langue autochtone parlée

That's my name, my clan and my nation, but my clan is actually unknown. I use the words --

--- Native language spoken / Langue autochtone parlée

-- for the Bearfoot Onondaga, which I am from.

But our language has been -- our language and our culture have been torn apart by corporations such as Canada. So at this moment it's unknown to me.

So my name is Carrie Lester. I am a mother, I am a sister, I'm an auntie, I'm a daughter to parents who have both died with cancer, a granddaughter to grandparents no longer with me, some of whom have died of cancer.

I am Mohawk Bearfoot Onondaga, Six Nations Grand River Territory through my mother and her mother's families and I have lived in Toronto for most of my life, including the Junction area not too far from the plant in question.

One of the first native teachings that I have ever received was that the Thanksgiving address of the Iroquois people. It's a daily prayer and it reminds us to be in a good state of mind, for all of us here in this room to begin our day in a good

state of mind and to give thanks for all that is around us, the people, Mother Earth, her waters, the fishes, the grasses, the food plants, the medicine plants, the trees, the animals, the winds, the funders, Brother Sun, Grandmother Moon, the stars, our four celestial guides...

--- Native language spoken / Langue autochtone parlée
...and Creator

--- Native language spoken / Langue autochtone parlée
We say these words humbly and with the greatest respect each and every day to remind ourselves of what is important, because all of these things are important to each other. We are all connected, we are all of this Earth. Clean air, land and water are important and necessary to all living things, not to a Corporation.

We cannot take any of them for granted, and yet some of us do. Some people have forgotten to think about these things every day and to give thanks for them, for their purity and sacredness. Some of us seem to think that the solution to pollution is dilution, however we know this does not work. We all know that once something is diluted and contaminated it spreads farther out, affecting a larger area and it is still very much there.

When it comes to the lake that we draw our drinking water from, Lake Ontario -- --- Native language spoken / Langue autochtone parlée -- or Mohawk word meaning the great sparkling water, to think that this uranium fuel processing plant has the permission granted by this Commission to dump up to 9,000 kilograms of uranium dioxide into the municipal sewers and then out to Lake Ontario, the body of water that we and millions of other people draw their drinking water from, to me is unconscionable.

Uranium fuel processing plants are but one stop in a nuclear fuel cycle. From the extraction of the ore to the crushing and separation of the uranium to the tailings, the processing of the yellowcake and further processing of the uranium powder into fuel pellets, the transportation all across this country of this toxic material and to the world to become fuel for what, to simply boil water, to produce electrical energy or, really, it's original purpose to produce weapons of mass destruction.

And where do these pellets go, the ones that go down to the United States? I would like that answered today.

We know that these fuel pellets,

these ceramic fuel pellets are used only in CANDU reactors, or so I have been led to believe. Yet, we ship these to, I think, Wilmington in the United States. Why? What do they use them for?

The damage done to communities where uranium is mined is unforgiveable.

--- Applause / Applaudissements

MS LESTER: From Elliot Lake, Ontario where over 120,000 tonnes of yellowcake were produced, leaving behind over 170 million tonnes of yellowcake -- sorry -- of radioactive tailings forever affecting the Serpent River First Nation's peoples, one of whom is right here in our audience. He has family members from there -- to the Town of Bancroft, Ontario where over 9 million pounds of yellowcake was produced, leaving behind about 4 million tonnes of radioactive tailings, to Saskatchewan where untold millions are still being mined leaving behind leaving behind further damage to the Northlands --

AUDIENCE MEMBERS: (Off microphone)

MS LESTER: -- affecting more populations of the first peoples of this land, the Dene, the Cree and the Métis, not to mention some settler people, I'm sure.

These tailings are either left as

waste rock or discharged into ponds containing such radionuclides as thorium-230 with a half-life of 80,000 years; radium-226 a half-life of 1,600 years.

The radium decays into gas radon-222 which yesterday was said to be not a problem, Ms Patsy Thompson, because although the readings at the mill site were high they were much lower further away, the further away one got from the site. And human populations were not living near the mill site but they work there. An animal population certainly lived there.

--- Applause / Applaudissements

MS LESTER: It's absolutely shameful how you think you can decide what life forms are important enough to live or die.

All this yellowcake then needs further processing and so much of it is shipped to Blind River -- so much of it is shipped to Blind River, Ontario. Some of it is shipped to the USA where it is processed into uranium trioxide and then trucked to Port Hope. I don't know how it is delivered between Saskatchewan and Blind River. I would like to know that, for the record.

So at Port Hope it's further refined into uranium dioxide for CANDU heavy water reactors and

uranium hexafluoride, UF₆, for enriching uranium for light water reactors. This material is shipped to enrichment plants in the United States, Europe and Japan, I understand.

Some of uranium from Blind River travels back to Saskatchewan for re-milling in a recycling program. So it travels the roads once again.

I understand from reading a report from Anna Tillman -- she has a Masters in Medical Biophysics and a Bachelor of Science in Mathematics and Physics from the University of Toronto -- in her article called "Yellowcake Road: Uranium Mining in Canada" that some of the byproduct generated at Blind River is incinerated at 3,000 to 6,000 degrees Celsius.

But she states that uranium cannot be destroyed by incineration because being a metal it cannot be destroyed. But it will turn into a ceramic whose vapour if breathed into our lungs can pass into our blood. And therefore, all organs of the body, including the brain, the seminal fluids, gentlemen, and through the placenta to a developing fetus.

I'd like to know if this is what's happening at the Toronto GE plant where the uranium dioxide powder is baked into ceramic fuel pellets. And is that being checked in the emissions?

I'd also like to know if anything else is added to that uranium dioxide to help it in shaping those fuel pellets before it's baked or sintered since this pellet is then ground down to a specific size for these fuel rods and then these particles that have been shaved off would then be considered some kind of waste material.

So I wonder also if this is a stage in which wastewater is being used making some kind of a slurry with this material and if this is what is then flushed down into Toronto sewers. Many of us here have been wondering how all this uranium gets dumped into our sewers and we have not had a good explanation of that.

Yesterday, we heard that floors and walls get washed down and workers get showered down. And I suppose -- sorry -- and I suppose we were supposed to believe that this is where those many kilograms of uranium powder become Toronto's sewage sludge.

So I'd like to know just how and at what stage this uranium does end up in our sewers, for the record.

This is important for several obvious reasons, I think, such as, well, it's uranium.

--- Laughter / Rires

AUDIENCE MEMBER: (Off microphone)

Not in its natural state, by the way.

MS LESTER: I'm getting there.

Also, it ends up --

THE PRESIDENT: Can you please --

MS LESTER: -- at a filtration plant
or directly --

THE PRESIDENT: -- start winding it
down, please?

MS LESTER: -- into Lake Ontario if
there is a strong enough rainstorm. Does this material
and any byproduct given off actually get removed at a
filtration stage at the filtration plant?

Is the filtration plant aware? Are
they fully aware that this material is in the sewers
and they are dealing with it?

There is also a problem of storm
sewers backing up and depositing the material back up
onto the roads and perhaps into people's gardens where
they enjoy gardening with vegetables and eating those
vegetables. If the storm is strong enough like we had
this past summer that is a very real possibility.
Storms like this are now predicted to be part of the
norm.

I'd also like to know about the environmental impact of this material and what it would have on the aquatic life on the shores of Toronto's beaches.

Yesterday it was mentioned that this natural uranium has such a low radioactivity that the plant does not even need to have a trifold sign out front anymore. So I wonder why workers even bother to change their work clothes and why they need to shower the material off before going home?

AUDIENCE MEMBER: Why? Why?

MS LESTER: For the record I want that answer.

I also take issue with this continued use of this phrase "natural uranium" because we know that it has already been processed at least twice before it arrives in Toronto and it is no longer in its natural state.

--- Applause / Applaudissements

MS LESTER: It is now in a state which is breathable and ingestible. It is a fine powder or sand, as somebody mentioned yesterday.

And even if it wasn't at all radioactive it would still do damage in some way to our lungs and to the workers' lungs and possibly in their

guts. And after all it is a heavy metal and radioactive and it's a chemical toxin, as we heard Mr. Elder state yesterday, which will affect the kidneys. And we have heard at the Canadian meetings that many people stood up in anger and outrage that family members had kidney damage, multiple family members.

I would like to state that I take issue with the soil readings and the air emissions and, first, if this plant wasn't there, there would be zero emissions. But since it is there I wonder about the samples that seem to show nothing more than is ever present, background radiation.

So are you simply looking for radiation readings, gamma radiation, alpha, beta? Are you seeking out actual uranium particles that would be in the soil?

AUDIENCE MEMBER: (Off microphone)
public health.

MS LESTER: Because if you're finding uranium dioxide in the soil this is not natural and it is not normal for this area since uranium dioxide has been processed.

I also see a problem with the higher radiation readings --

THE PRESIDENT: Are you going to

allow for some questions to be answered or not?

MS LESTER: I thought I would do that at the end. No?

THE PRESIDENT: You are way over your time allotment, so please wind up.

MS LESTER: I also see a problem with the higher radiation readings that come from the train tracks. It was stated yesterday that this area is commercial, right, and that the allowable limit was about 33 micrograms per gram of soil, but residential is set for 23 micrograms of gram per soil. But the amount of the tracks were 21 and Zach mentioned they were up at 30 something a number of years ago.

Well, this area may be designated as commercial but it is used residentially. Many residents use these tracks to walk along and they walk their dogs along. There was a recent report in the Toronto Star that said there are elevated rates of cancer among dogs.

The partner of Toronto's mayoral candidate, George Smitherman, was found along these tracks in a state of mental distress. A young Anishinabe girl was found struck dead by a train along these tracks in an area that she and her friends hung out in.

AUDIENCE MEMBER: Terra Gardner.

MS LESTER: Terra Gardner.

So either this area needs to be re-designated or the radiation trifold signs should be put in place there. I've heard from a worker from the 1970s that in those days even paper masks -- or, sorry, not even paper masks were used by workers. Eventually they were introduced and later Carter's masks were brought in and then self-contained airflow hoods were used. But these hoods had a set amount of air, I think, from a Scott air pack. And if that air got used up the worker was in a certain amount of distress knowing that they needed to breathe but concerned about the air that they would be breathing in.

THE PRESIDENT: Are you going to complete this or otherwise cut off your mike?

MS LESTER: I'm completing it is what I am doing.

THE PRESIDENT: No, you are not completing it. You are just going on and on and on.

MS LESTER: It's because this is what I have written.

THE PRESIDENT: That's fine. Just please wind up and get down to the bottom.

MS LESTER: That's what I am doing,

sir.

So knowing this, I am concerned with the health of those early workers. I would really like to know -- but I need to go a little bit slower because your translator needs to translate.

So I'd like to know and I think the public has a right to know about the health implications of these earlier workers. I would also like to see emission stats from the beginning of this operation at 1025 Lansdowne because the standards and safety measures of the health of the workers was lax in those early days. Then one would assume plant safety and emission standards would be equally lax.

I'm sure long-time residents would be most interested in this information.

--- Applause / Applaudissements

MS LESTER: I'm also concerned with the contract workers at the Nordion plant who do not wear licensed dosimetry badges, as was mentioned yesterday between Mr. Binder, Mr. Beckman and Mr. LeClair. I wonder what radiation these badges actually measure. Is it only gamma radiation or is alpha radiation also measured by them? And if not, then how do we know they are not breathing in these alpha particles, which I have come to understand are

incredibly damaging although I would like also to have Ms Patsy Thompson explain her theory on the non-existence of alpha-emitting uranium at the plant because there seems to be conflicting information that we, the public, are receiving.

I'm concerned about the lack of importance given the story about a worker up in Blind River who had pressurized barrel uranium that exploded at his face upon opening it. Just when I thought --

THE PRESIDENT: Okay, thank you very much.

MS LESTER: -- Ms Veloshi was going to add --

THE PRESIDENT: Can you cut the mike, please? Please.

AUDIENCE MEMBERS: (Off microphone)

MEMBER McDILL: You know what? I actually have some questions. I actually have some questions.

MS LESTER: (Off microphone) Okay, and then I go on then.

MEMBER McDILL: No, I have some questions.

MS LESTER: (Off microphone) Okay, and then I can go on.

THE PRESIDENT: No, you are not going to go on. We are going to ask the questions and we are going to engage in some discussion on some issue that you raised.

AUDIENCE MEMBER: Don't tell us what to do!

THE PRESIDENT: Dr. McDill.

AUDIENCE MEMBERS: (Off microphone)

THE PRESIDENT: Are you going to sit and allow us to ask some questions on some of the things you have stated or not?

MS LESTER: When I'm finished because you all have pens and pencils and you can be writing your questions down.

THE PRESIDENT: No, listen, we stated at the beginning telling you we have read your submission and you were supposed to --

MS LESTER: This is different than my submission.

THE PRESIDENT: Well, then you're supposed to submit that to us to read. You are not sitting down. That was the rule. The rules are very clear.

AUDIENCE MEMBERS: We want to hear. We want to hear. We want to hear.

MS LESTER: You are guests on our territory. We asked you to be here.

THE PRESIDENT: We came here with open minds to listen but we have established rules of procedures which you agreed to obey. And you just now -- not taking advantage of the openness of this thing.

AUDIENCE MEMBERS: (Off microphone)

THE PRESIDENT: Your turn will come. Do not interfere in our discussion.

You've got one minute to wind up. You've got one minute to finish your presentation.

We need to give time to other intervenors. Have respect to the other intervenors.

MS LESTER: We all have time.

THE PRESIDENT: We do not. We are going to run out of time.

MS LESTER: So if I was -- I could be finished by now if you hadn't interrupted, Mr. Binder, okay, all right?

I am concerned about the lack of importance given to this worker up in Blind River. Just when I thought Ms Velshi was going to ask about the condition of this worker, she was more concerned with the lost time work of a worker who fell off a

ladder. There was absolutely no mention of the health of this worker who had the uranium yellowcake explode at him. I remember reading about this story in the news but, again, never did see any follow up on the worker's condition. How is this worker now? What was done to remedy the situation? Are you tracking his health? For the record, I want to know.

I'm concerned that Toronto Public Health does not do their own investigation into the workings of this plant and have ongoing health survey of the residents past and present. I also wonder if they would be involved with the health of the workers past and present.

I need clarification from Mr. McEwan and Mr. Desiri about their discussions on the rail accident and their lack of concern since there are multiple barriers in place and the area of significance is well away from the rail line, said Mr. Desiri yesterday. There would be no rail accident because there are barriers in place and the uranium is far enough away that it wouldn't be impacted by a train. Are you kidding me, Mr. Desiri?

During the written intervention discussions I believe it was either Mr. Desiri or Mr. Tolgyesi -- I don't know how to pronounce your name --

spoke about the decontamination of transport trucks and that they needed to be washed down. But later it was stated that they would not need washing down, so what is it?

Now, perhaps -- now perhaps it was the lateness in the day and my own fatigue last night but I would like clarification on this. It makes me wonder again about contaminated water going directly into our sewers and those speaking of the contaminated water going into our sewers. I wonder if GE-Hitachi or CNSC has informed Lystek Industries up in Dundalk, Ontario where a manmade sewage sludge lagoon is being built to take Toronto sewage waste which will be processed to become fertilizer for food crops.

And finally, I am outraged and insulted that during the written intervention last night, the discussion between Ms Velshi and Dr. Patsy Thompson concluded that the most dangerous thing about this plant was a psycho-social fear that nuclear and uranium and radiation instills in people. Really? That's the most important thing, the psycho-social fear?

So we need the name of the insurer. We need the amount of the insurance. We need the train accident scenario. However, I understand that the

fence is strong enough to keep a train out, Mr. Desiri.

--- Applause / Applaudissements

MS LESTER: And in terms of safety for those living in the two low-income housing units directly across from the train tracks from GE Hitachi, I want GE Hitachi to answer if it would be safe for them to breathe the air directly from their stack continuously.

Would it be advisable for you to breathe that air in 24 hours right from the stack? Thank you.

THE PRESIDENT: Thank you very much.

--- Applause / Applaudissements

AUDIENCE MEMBERS: (Off microphone)

THE PRESIDENT: The next submission is --

AUDIENCE MEMBERS: (Off microphone) going to answer some questions. She should answer those questions.

THE PRESIDENT: Excuse me. We've heard it. There is no questions. Thank you for your intervention. Thank you for your intervention.

I would like to move on to the submission by Marnie Bjornson and Mr. Simon Cheesman. I don't know where -- Ms Bjornson, the floor is yours.

Please proceed. Please proceed.
Don't move. You can stay there.

Ms Bjornson, please continue.

13-M51.54

Oral presentation by Marnie Bjornson

MS BJORNSON: Thank you.

THE PRESIDENT: Go ahead.

MS BJORNSON: Can I ask him to --

MR. RUITER: Oh, my God, Marnie.

Where is your solidarity, Marnie?

THE PRESIDENT: Can you remove Mr.
Ruiter, please?

MR. RUITER: (Off microphone) This is
the NDP right here. She worked for Andrew Cash's
office. She is doing that to report information.

THE PRESIDENT: Go ahead, please.

MS BJORNSON: First of all, I'm not
the NDP. My name is Marnie Bjornson and I'm just an
area resident and I have done some volunteering for
Andrew Cash.

Okay. So this submission is
basically a series of questions about the way the CNSC
has represented the uranium concentrations in the soil

in the staff report prepared for you. I'm really focusing on the Toronto facility.

I'd like to note that I'll be referring to the CNSC's soil, own soil sampling report even though it's not mentioned at all in the staff report. I don't know why but the CNSC's -- the MoE soil results are in the staff report but the CNSC's own soil sampling results aren't in the report. But I think they're relevant, so I'm going to use them.

And I guess I have some questions. My first question is can the CNSC make an addendum to the staff report with the soil sampling results that they presented yesterday?

I actually have my questions written down in a list so you don't have to sort of magically write. I can give you one of these.

Okay. So you can refer to the screen. I's just like to start with some questions about this figure that appears in the CNSC staff report on page 85. This section of the report summarized the soil testing results for various facilities.

Based on this data in the figure, the CNSC concludes that -- I refer to the screen:

"Soil sampling results in 2012
continue to indicate that

current uranium emissions from the uranium processing facilities have no measurable impacts on soil."

So I wanted to ask some questions about this figure and specifically regarding what is called here an annual average and whether using this average helps us understand whether the soil on the perimeter of the facility has been affected by the activities at the plant.

So this average is -- can you hear me -- this average is not annual in the conventional sense of the term. That is, it does not represent an average based on a series of readings throughout the year as do other annual measurements mentioned in the staff report like the air measurement. Rather, this 1.9 micrograms per gram figure represents an average based on a once a year measurement of 49 sites spread out over a kilometer, I think.

So it's not an average based on measurements through time but across space. So it's some kind of spatial average I think it would be fair to say.

So -- I'll go back here -- I guess I want to know -- so referring back to this figure, how

are the other averages from the other facilities, like the Blind River Refinery or the Port Hope conversion facility at Cameco fuel manufacturing facility, on the X-axis, how are they calculated? Are they also based on 49 sites with the same kind of spatial orientation to the site? If not, are they actually comparable in the way they are compared in this chart?

And yesterday, GE-Hitachi presented a slide, which I just -- I didn't get a -- I wasn't able to capture it on a screen grab. I was watching at home. And they compared the average of 1.9 micrograms per gram to an MOE average of .7 and a CNSC average of 1.4. I don't know where those figures are from.

But the MOE measured 24 different sites and the CNSC measured 32, some of which were the same and some of which were different. So if everyone's measuring different sites and different numbers of sites, how can these numbers be comparable?

Also, it's my understanding -- sorry -- that the CCME standard of 23 micrograms per gram is not based on a spatial average. So I'm wondering if it's correct to compare it to this kind of spatial average in this way, where the report on page 85 says:

"The annual average

concentration is well below the most restrictive limit of 23 micrograms per gram."

Is that a good comparison? Can you compare this average to the CCME guidelines?

So, I guess, my question basically is: Why is this average being used? In what way is it a meaningful number? How does it help us understand whether certain areas are being contaminated?

Wouldn't it be more appropriate and more accurate to compare the 23 micrograms per gram to actual readings? So we can find these readings in the CNSC soil testing results, which weren't included in the staff report?

This is from page 12 of the CNSC Soil Sampling Report, and you can see there's some readings that sort of are almost as high as the 23 micrograms per gram CCME standard. So there's one at site 16 which is 16.5; 17 is 21.2; and then there's an elevated reading at site 9.

And I think yesterday the CNSC presented a slide where they compared their findings -- because they took these samples along with GEH and they both tested them -- and I think they presented a slide where site 17 was actually 24-something, but, again, I

didn't get a screen grab. So they can speak to that. So that's above the 23 micrograms per gram CCME limit.

And then if you look at the history of a GE soil sampling result -- this is also from the CNSC Soil Sampling Report, so it's not included in the staff report -- you can see that there's elevated readings historically as well. One as high as 30.9, which is, you know, well above the residential and touching onto the commercial limit.

So, I guess, I want to know what happened in the past when high readings like the 2009 reading were recorded; and will the areas along the track where there's some indication of contamination be remediated?

And then, I guess I want to come back to this statement and ask if the CNSC can still stand behind the statement that:

"Soil sampling results in 2012 continue to indicate that the current uranium emissions from the uranium processing facilities have no measurable impact on soil."

There's also the question -- sorry -- there's also the question of the CCME standard. So I

guess I -- so I've talked to the CNSC and I've talked to the Ontario Ministry of the Environment, and there seems to be -- the CNSC has said they use the provincial guideline. But when I spoke to the Ontario Ministry of the Environment they deny any responsibility for setting -- for the regulation of nuclear facilities, and they insist that the CCME, the guidelines have been developed for site redevelopment and not for the management of nuclear facilities.

So I guess I want to know which level of government is actually meant to be setting the standards for those perimeter readings; and is the CNSC using an appropriate standard because the Ontario Ministry of the Environment seems to suggest they're not?

And then Paul Desiri said this morning that there were four levels or limits for various emission readings. And I guess I'd like to know what the various levels and limits, action limits and levels are for soil testing.

So that's the problem with the standard itself, whether it's appropriate. And then even if this were an acceptable standard, how can the GEH figures be treated as reliable and verifiable if they are not comparable to this standard?

Again, this is from the CNSC Soil Sampling Report, and they write -- I'll direct you to the screen:

"The measured concentrations of uranium in GEH-C samples all fall below the most restrictive CCME guideline for residential, parkland use.

It should be noted, however, that the GEH staff used a non-standard methodology to collect soil samples. Consequently, it is very difficult to compare the GEH-C results with those of the MOE and the CCME guidelines, which are based on a standard sampling methodology."

In the Ontario Ministry of the Environment Report, they wrote:

"The results from the GE-Hitachi soil survey are not directly comparable to the Ministry soil survey due to differences in sampling methodologies, sampling designs, sampling locations, and analytical methods."

So if the results are not comparable to the standard, doesn't this invalidate them?

Since auditing of staff reports is such an important part of the new regulatory regime, I would like to know when the last time the soil samples were verified or audited by CNSC and third parties.

This is important because, as we know, Transport Canada only carried out one of four of its planned audits of federal railways -- and we know what's happened in Lac-Mégantic, and that's kind of blamed on the regulatory regime.

If CNSC and other third parties have regularly verified the soil samples, why weren't GE-Hitachi's non-standard practices discovered before now?

Clearly, the CNSC was not verifying the public information program. And there seems to be some lapse in terms of verifying the soil testing. This suggests an unsettling pattern which echoes what is going on in other regulatory environments like food and trains.

I hope that the CNSC will clarify its standards for soil testing; produce more transparent measurements; investigate the high concentrations of uranium in the soil along the southern periphery of the facility; and introduce more third party validation of soil results.

Thank you for your time.

THE PRESIDENT: Thank you.

Questions?

--- Applause / Applaudissements

MS BJORNSON: Actually, I don't know if -- so I, like, I posed a bunch of questions and I wrote them down, if anybody is interested in --

THE PRESIDENT: Okay. You gave us all kind of -- in your submissions, therefore, so all kind of questions --

MS BJORNSON: All right.

THE PRESIDENT: -- so we're going to get into them now.

Staff, maybe we can -- is the Ministry of Environment still with us? Maybe you guys will give us some room at the table for them to join us?

AUDIENCE MEMBER: No.

THE PRESIDENT: Can you please allow the Ministry of Environment to come to the table?

AUDIENCE MEMBER: No, there's space right there.

THE PRESIDENT: There is how many of you --

MR. CHARRON: Two.

THE PRESIDENT: Two? Could you please come here and...

--- Pause

THE PRESIDENT: Please.

Can you inform us about the CCME is the standard for uranium in soil and how you treat that particular standard?

MR. CHARRON: Okay. Chris Charron, for the record. I'm with the Ontario Ministry of the Environment.

The CCME standard has been adopted by the Ministry of the Environment under the *Brownfields Regulation*, that's the generic effects-based standard established to protect human health.

There are two types of standards in the *Brownfields Regulation*. There are the background standards which are based on typical background concentrations found across Ontario.

Then there are the generic effects-based standards, whether it's potable water, non-potable.

And for uranium for industrial -- sorry, for residential, parkland, and institutional land uses we have adopted the CCME standard.

THE PRESIDENT: So is your

methodology -- how often do you do your measurement? And is your methodology different than the CNSC methodology and the GE methodology and the Toronto Public Health methodology?

MR. CHARRON: Okay. So the first question: How often do we do measurements around the GE facility? To my knowledge, the first time we've done it was this year, in 2013.

--- Laughter / Rires

AUDIENCE MEMBER: Shame.

THE PRESIDENT: Okay.

MR. CHARRON: And as the intervener mentioned, our methodologies aren't necessarily directly comparable to -- I'm not familiar with the CNSC sampling methodology, but I am somewhat familiar with the GE sampling methodology -- and there are differences. So the results aren't necessarily directly comparable. There's different sample designs; there are different methodologies; and there's different analytical methodologies to be used.

We also focused -- the purpose of the Ministry's soil sampling this year, in 2013, was to focus on the residential community. We wanted to determine uranium concentrations in surface soils. We sampled sites that were representative of the type of

soils that the community would be exposed to, the people, children, adults, their pets, et cetera.

GE sampling included some residential sites -- some sites within the residential community, but they also include sites on the property and on the railway lines.

We did not sample areas that are not public accessible.

THE PRESIDENT: So the intervener argues that if they are not comparable, then maybe we cannot trust them. What would you say to that?

MR. CHARRON: Well, we did sample their -- GE sampled two boulevard sites that were a close match to the type of sites that we sampled in 2013, and so the Ministry sampled adjacent to those sites. And the results -- GE's results were slightly higher than the Ministry's results, but based, you know, understanding that there are different sampling methodologies and analytical methodologies that the results were essentially comparable.

AUDIENCE MEMBER: Wow! So a sample size of two, we're supposed to feel confident that they're comparable?

AUDIENCE MEMBER: (off mic)

THE PRESIDENT: Staff, do you want to

comment on their methodologies?

DR. THOMPSON: Patsy Thompson, for the record.

Excuse me, I'll ask Dr. Slobodan Jovanovic to speak to the uranium analysis methodology that is used by McMaster University, who's actually done the work for GE, and compare it to the methodology used by the CNSC and also with the MOE methodology, so we can understand why some of the uranium values are different for similar sites.

DR. JOVANOVIC: My name is Slobodan Jovanovic. I work as the Analytical Chemist Specialist at the CNSC laboratory.

In June of 2012, the CNSC staff accompanied the GE personnel who was taking the annual samples. Our staff member asked GE to get the split samples at the point of taking. And the samples were then taken -- part of the samples were taken to McMaster University for analysis, which is one of the third parties doing the work for the GE; and part of the samples were analysed by the CNSC laboratory.

The McMaster uses neutron activation analysis in analysing the samples. The CNSC laboratory used the digestion plus the mass spectrometry method in analysing the samples.

The samples were taken and split at the point of taking. This is not a completely appropriate way of splitting the samples, of getting representative sample, so that both laboratories will get the same sample.

The only way that that could be achieved is if the samples were taken to the laboratory, properly homogenized and split at the laboratory.

This was not done at the point where this was taken. So there is a difference quite significant in one of the samples that we analysed, which is -- I don't have the number of location in front of me -- but our result was 16 micrograms per gram and the McMaster result was around 4 micrograms per gram.

It is entirely possible when doing the split sampling on the site that there is a hot particle in one of the sub-samples that were split at the site.

The CNSC laboratory subsequently -- that was one work of the CNSC laboratory where we basically did the same work as the McMaster laboratory. And I think the intervener mentions a certain number of samples that were done by the CNSC laboratory with that

work.

In June of 2013, the Ministry of Environment took the samples in residential areas. From 24 locations, 164 samples were given to the CNSC laboratory for analysis.

We did a complete analysis of these samples, again using total digestion plus mass spectrometry and the X-ray fluorescence analysis methods.

Our methods will give you the total uranium content in the samples. The Ministry of Environment did the same analysis using a partial digestion, which will give you what is in our world call "extractable uranium," which is, I believe, more appropriate for the Ministry of Environment purposes, whereby they are looking for something that is more bioavailable. And the CNSC has done the result, which is total uranium in the sample, including bioavailable and one that could be trapped in siliceous matrices that's not extractable.

THE PRESIDENT: Okay. Let's assume I understood everything you said here. The bottom line is there are different samples, different approaches, but can you trust the bottom line conclusions that it is within the 23 kind of a limit?

DR. JOVANOVIC: The samples, I think it was presented in the staff report yesterday, our results along the results of GE-Hitachi, and they were colour-coded so that we can understand that the 23, or the -- our value was sitting at 21 and the McMaster value was 24 micrograms -- belong to the sampling location along the railroad tracks, which is a commercial property.

So that was not kind of looked against the 23, but it should be looked against the 33 micrograms per gram.

The values that were obtained analysing 164 samples from 24 locations were well within the background levels of uranium, which are around 2.5 micrograms per gram in the soil.

I would say that the Ministry of Environment has gotten a little bit lower result than we did, but the conclusion was the same. Our results went to, I believe, the range of values that we found was from .3 to 2.9 micrograms per gram, whereas Ministry of Environment found up to 1.9 micrograms per gram. But still, that's not even close to 23. That is, I would say, one order of magnitude lower.

THE PRESIDENT: So two quick further questions. So the intervener questioned whether it's

proper to use averages here rather than presumably a range?

And secondly, how often, moving forward, how often will those samplings be carried out by CNSC, MOE in addition to what GE does?

DR. THOMPSON: So Patsy Thompson, for the record.

Perhaps before the MOE provides a response to what they will be doing moving forward -- so in terms of comparing averages to the 23 micrograms per gram, it is appropriate in the context that it was done in the presentation, in terms of comparing sites and comparing it to the overall CCME guidelines.

In terms of -- if we were doing a site assessment, then we would look at individual values to compare it to the 23 micrograms per gram value.

The 23 micrograms per gram value is a value that is very conservatively safe. The expectation during -- and it's clearly written in the CCME protocol -- is if concentrations of uranium in locations are higher than the guideline, the expectation is that we then do a site specific assessment looking at uranium in that location to look at bioavailability.

The standard is based on 100 percent bioavailability of uranium when we know in fact it's about .2. And so it's a trigger to do additional work, not a trigger to identify that it's a health impact.

THE PRESIDENT: Before giving the floor back to the intervener, is MOE, are you planning to do some further follow-up?

MR. CHARRON: Chris Charron, for the record.

Again, we focused on the residential community soils within the residential community that were representative of the type of soil set people living in that community might be exposed to.

We had sample sites downwind, upwind. We had a control site. All the sites and all the sample results came back well within typical background regions across Ontario. And there's no evidence at this point that there's -- air emissions from GE-Hitachi's had a measurable impact on the residential community itself and, as such, we plan no further sampling at this point.

THE PRESIDENT: Okay.

Back to you.

MS BJORNSON: So can we come back to the question of averaging and why, like, the -- so the

CCME guideline that has 23 micrograms per gram, is that based on a spatial average?

MR. CHARRON: I'm not an expert in the establishment of the standard so I don't know.

THE PRESIDENT: I think staff --

MS BJORNSON: I don't think it is.

THE PRESIDENT: -- would try to explain, again, the basis.

DR. THOMPSON: I'm Patsy Thompson, for the record.

The intervener has seen our report on our Web site, the CNSC did not average the data. So all the data points, all the values are presented.

The purpose of the CCME guideline is to identify areas that would potentially need remediation. And so, normally, we look at representative samples for different areas. So we would not, if we were doing a site assessment, average the values to compare them to the standard.

I think what was done in this case, for the presentation, was to compare performance across industry sectors, and that's why the averages were presented. But when we do specific assessments, we do not provide averages. And that's why we did not average the values in the report we've posted on our

Web site.

THE PRESIDENT: Mr. Elder?

MR. ELDER: Peter Elder, for the record again.

As Dr. Thompson said, the averages would do a comparison. In the appendices at the back of the report for each of the facilities the maximum value recorded through is also given, so with the maximum value is also in the report.

So again, the averaging is just for comparisons between the sites. And if there are any values there above or need to be further investigated, we do do that.

As we had explained yesterday, there is -- around the GE-Hitachi, there are three different -- the GE-Hitachi's program looks at three different types of land use, industrial, commercial and residential.

THE PRESIDENT: Does that satisfy, the response?

MS BJORNSON: Well, I guess the question is, is the Commission satisfied that the way that this -- that the readings were represented in the report using the averages is a good way to inform you about what's going on around the plant?

THE PRESIDENT: Well, let me tell you, from my perspective, when I get four reports I'm satisfied, so we got from GE, from the Toronto Board of Health, from MOE and from staff. And they all reached the same conclusion. That gives me some comfort.

Anything else?

Dr. McDill.

MEMBER McDILL: I believe it was the previous intervener referred to the -- thank you. A little feedback there. Referred to the railway area, for example, which is commercial, which is being probably used by residents not as parkland. I don't think they're picnicking, but walking, certainly.

So do we have some concern there?

DR. THOMPSON: Patsy Thompson, for the record.

The value of 33 micrograms per gram for commercial property also considered toddlers and people of different age groups using the area with the same toxicity information and the same toxicity benchmark.

Just instead of assuming that someone is there 365 days a year, 24 hours a day, the occupancy factor is lower and so, on that basis, the standard is very safe. And there's no concern for people who are

using and walking along the railway track or playing on the railway track.

MS BJORNSON: Can I just ask a question about the commercial -- the idea that that area is commercial? Because that whole area, the four blocks around the plant within the last two to five, up to 10 years, has been completely rezoned.

It used to be all industrial. Now the only industrial site there is the GE-Hitachi plant.

So everything around there is now residential. It's all been rezoned. Like up to two years ago, they were still doing the rezoning.

So I've looked at the most recent rezoning document, and I couldn't actually see what the railway was zoned as. But I understand that they're not always zoned as commercial.

So I'm just wondering if the CNSC knows if it's been rezoned at the same time the other property was and, you know, just to make sure that it is still commercial.

THE PRESIDENT: Okay. We can verify.

DR. THOMPSON: Perhaps I could add for the -- the only area where we've used the commercial guidelines is really along the railway track. But to -- when we talked about the residential,

it's based on a toddler eating soil, only soil.

For the commercial land use, the occupancy factor is 10 hours a day, five days a week for 48 weeks and also includes a toddler consuming soil.

And so if someone was growing a garden, for example, in some future time, the vegetables in the soils would be safe to eat.

THE PRESIDENT: But the question was, are we -- in the chart that you showed, are we using the latest zoning where the intervener is saying that the commercial now became residential?

DR. THOMPSON: (off mic)

THE PRESIDENT: Okay. So we will check it out and let you know.

DR. THOMPSON: Okay. Perhaps -- Patsy Thompson, for the record.

The only place where we've used commercial to represent our data is, really, along the railway track, period.

THE PRESIDENT: Okay. I get it.

So independently of what it's zoned, right beside the railway, if I understand correctly, you assume it would be always commercial rather than residential right on the railway track.

MS BJORNSON: No, it's not always commercial. It varies according to who owns the -- like who owns the railroad, if it's federal or provincial or whatever.

THE PRESIDENT: Okay. We'll --

MS BJORNSON: Can we attempt to -- just to get that today, maybe? Is it possible? It may not be possible.

DR. THOMPSON: Patsy Thompson.

We'll try to get the information we can, but just to specify, if the land use were to change, then there's a requirement to do the assessment in terms of site suitability.

But we'll attempt to get the information.

THE PRESIDENT: Well, I guess the Toronto Board of Health -- I see some people in there. Maybe they have some contact in the planning section that can give you an update as to the zoning.

MR. AYRE: (Nods yes)

THE PRESIDENT: Thank you.

Okay. Thank you. Thank you for the -- any final word?

MS BJORNSON: Well, I guess -- well, not all my questions were answered.

Will there be any remediation of that bit along the track? Like there's obviously high readings there, right. There's something going on there.

And I guess, you know, the -- I mean, obviously the -- my issue is with the idea that, you know, in the staff report -- and I know you guys don't read the soil reports, right.

So in the staff report, it said that there was no effect on the -- let me just go back to this here. No measurable impact on soil from the plants.

And you know, I don't think that is a supportable statement, and so I guess I'd like to know what the CNSC thinks about that. And --

THE PRESIDENT: First of all --

MS BJORNSON: -- also, will there be remediation along the track?

So I mean, there are high readings there. I mean, it's clear, right, there are high readings.

So will that be remediated? Can that be cleaned up in any way?

I mean, those tracks do get used so, you know, it would be good if they could maybe dig it

up or do whatever they do to fix it up.

THE PRESIDENT: Okay. Well, before -- just so you know, we do read those reports, including the sample reports.

And staff?

DR. THOMPSON: Patsy Thompson, for the record.

Just the slide that the intervener put up about the CNSC conclusions, there was no impacts from emissions. And so it's been recognized -- and from the MOE statement a few minutes ago, that air emissions have not had -- resulted in accumulation of uranium in soils in residential properties.

The area that we're speaking about has been recognized as one that wasn't contaminated by air emissions, but by practices from the past in terms of washing equipment.

THE PRESIDENT: So it's historical waste, you're saying. And therefore, does it require any remediation or it will dissipate over time?

DR. THOMPSON: Patsy Thompson, for the record.

It's unlikely to dissipate over time. It will migrate down over time, but very slowly.

The levels are not such that they

would pose a health hazard and would not require remediation.

MEMBER McDILL: Mr. Chair, can I ask, then, on Table 2 of 3.2 -- page 4, thank you. Page 4.

It shows the one site that was 30.9, which was referred to previously, and I believe it's the same site, 2009 -- or very close to the same site, 2009, 2010, 2011, 2012. That's just popped up there.

What's the significance of the decrease there, if it's not -- it may just be different spots close to each other, so there was --

DR. THOMPSON: Patsy Thompson, for the record.

That's correct. When you take soil samples, even if you're in the same area, you can -- you know, the --

MEMBER McDILL: You certainly can't take the sample twice in a row.

DR. THOMPSON: Yeah.

MEMBER McDILL: It's gone.

DR. THOMPSON: So there is spatial variability.

MEMBER McDILL: Okay.

DR. THOMPSON: That would explain the ups and downs. But essentially, to be able to look at

migration, we would need to do the type of monitoring that the MOE has done with a corridor to look at changes with that. And that's not what is done in this case.

MS BJORNSON: So there's -- you don't verify the GE's soil test? Like how often do you verify their soil tests and/or how often are the third party verifications done?

Because this -- I mean, it's the issue of auditing, right, which is huge at the moment.

MR. ELDER: Peter Elder, for the record.

We did verify, again, we took the same samples as GE, so we verified all the process on GE this year, and we will continue to do that periodically as part of our independent monitoring program going forward.

MS BJORNSON: Can I ask when the last time you did it before this year is?

MR. ELDER: As far as we're aware -- well, I'll get back to you to see if we've done it in the past.

MS BJORNSON: I did email that question to the CNSC as well.

MR. ELDER: But what I say is that

the values that are coming up are not in the range of concern and not -- certainly not in the range that we've seen in other areas where we have done our independent monitoring.

THE PRESIDENT: We've got to move on, unless you have something --

DR. THOMPSON: Patsy Thompson, for the record.

There was a question about zoning, and so -- about municipal zoning. And so the railway is zoned as utility transportation by the City of Toronto. It's not specified as commercial or residential. It's classified as railway zone for utility and transportation.

THE PRESIDENT: Okay. We've got to move on.

Thank you very much.

MR. LeBLANC: I just want to do a roll call in terms of what is coming next, now and after lunch.

So there are some people we have not identified. Sappho Mullins and Ken Collins. Elisabeth Caruso.

So in this regard, we will treat those three submissions as written submissions and

we'll proceed right away, Mr. President, with the presentation.

THE PRESIDENT: Okay, thank you.

So I'd like to move on to the presentation by the Canadian Coalition for Nuclear Responsibility as outlined in CMD 13-M51.57.

I understand that Dr. Gordon Edwards is joining us via teleconference.

Dr. Edwards, can you hear us?

DR. EDWARDS: Yes, I can. Can you hear me, Dr. Binder?

THE PRESIDENT: Yes, I can. Please proceed.

13-M51.57

**Oral presentation by
Canadian Coalition for Nuclear Responsibility**

DR. EDWARDS: Well, thank you very much, once again, for the opportunity to make a submission on this subject, which is obviously of great concern to the local residents, many of the local residents.

I would like to point out that there's a real problem with credibility in GE-Hitachi,

and even in the CNSC staff itself, with regard to seemingly contradictory statements.

For example, if we go back to the 2010 hearings that led to the licensing, the current licence, Peter Mason, the CEO of GE-Hitachi, said, quote:

"We have, think, a very positive and constructive relationship between GE-Hitachi and our local communities which has been built over many, many years."

And from what I can gather, it seems that is, then, not true.

There are some other quotes from the same proceedings along the same line, and the Commission Member Graham repeatedly asked about how they knew that the local community was informed about GE-Hitachi. And he asked the question, quote:

"You do send out newsletters to the one-half kilometre radius people in the area keeping them informed?"

And Mr. Mason answered:

"We've been there for 50 years. They are well aware of the sort

of thing that we do there."

Now, there are two considerations here.

One is the fact that this seems to be false information. It doesn't seem to reflect the reality in terms of community awareness of the plant.

And the other thing is that, although this type of communication with the community was a requirement of the licence, there doesn't seem to be any consequences for the fact that GE-Hitachi was not really providing this kind of communication.

And this is one of the problems that I have as an educator, is I feel that there is still very poor communications going on, even today, with regard to not just the -- what's going on with the plant, but with regard to what the real issues are.

Now, in the report itself -- in the licence itself, this is in Section 12.2 of the licence -- oh, excuse me. This is a compliance report of 2009.

In the compliance report, it says, quote:

"The major potential hazard in nuclear fuel fabrication is inhalation of airborne UO₂

particles."

It's in the inhalation route that is by far the most important, and this is identified in the CNSC documents. But it is not explained clearly to the workers or to the residents that inhalation is the most important thing.

How much uranium ends up in the soil is not so important compared with how much uranium ends up in people's lungs or in people's bodies. And that's really the fundamental question.

Now, when you're talking about inhalation of this uranium dust, why is that so important?

Well, the reason why is because the type of radiation that is given off is alpha radiation, and alpha radiation does not have any danger external to the body. It's only internal to the body that alpha radiation really does its damage.

And it's been well known that alpha radiation inside the body is far more damaging than other kinds of radiation. Better than -- far more damaging than beta or gamma by at least a factor of 20.

And so the important thing to realize here is that when people inhale even minute quantities of alpha-emitting material, if that material lodges in

the body and remains there for a period of years, then the person is getting internal radiation over a period of years. And that internal radiation can, in fact, amount to a very high dose to a select small number of cells.

But those small number of cells can be damaged in such a way that they reproduce and cause macroscopic problems in the organism, usually after a period of decades.

Now, that type of information should be available to the workers and should be available to the public, yet when I look at the documents again going back to the -- going back to the licensing process, there is not a single word about alpha radiation.

There's talk about beta radiation, there's talk about gamma radiation, and not one word about alpha radiation. No explanation in the documents themselves as to what alpha radiation is, what peculiar dangers it presents or the fact that this is the leading -- this would be the leading health concern regarding that matter.

So I feel that this is a serious failure on the part of the Canadian Nuclear Safety Commission in its relationships with the GE-Hitachi

plant not to make that clear in the documentation.

We heard, for example, just recently from Patsy Thompson about a tot, a toddler, eating soil. Well, eating soil is -- again, that's not the main problem. The main problem is breathing the material.

And because the UO₂ has been processed, it has a very, very fine -- it's very, very small diameter particles. Even yellowcake particles range between five microns and 15 microns in diameter, a micron being one-millionth of a metre. And the lower range of that particle size is what we call respirable particles.

Particles below 10 microns generally can be inhaled into the deepest parts of the lung. And because UO₂ is insoluble -- quite insoluble, it can lodge there for a considerable period of time, causing large local exposures, which are undetectable from the outside.

And also, this can be cumulative because if you're breathing amounts each year, then you have a build-up of this material. And the fact that you can't measure the radiation exposure directly means that you really don't know what people are being exposed to, whether they're workers or members of the

public.

And this is a concern.

Now -- so let me -- because I only have a limited time, let me switch to another subject because I have to use my time well, and that is about this contaminated area near the track.

Once again, we have very bad and not at all reassuring communication from the CNSC staff.

We heard earlier today that the levels -- the permissible levels, the -- what do you call it, the standards, the -- are irrelevant because the actual performance is so far below the standards that we don't have to worry about the fact that the standards are way too high or way too lax. This is not even a question. It's irrelevant.

Then we heard recently from Patsy Thompson, for example, that even when you get very close to these standards such as in this contaminated area where, at one point, it was measured at 30.9 compared with the standard, which is 33, once again we hear the standards are irrelevant because, in fact, it's nothing to worry about. You have to look at the bio availability.

And the bio availability, apparently, is described in terms of a toddler eating the earth

which is, again, an inappropriate way of describing the danger.

So one -- this does not breed confidence. People realize that the Canadian Nuclear Safety Commission is supposed to be the champion of public health and safety, not the champion of the industry. They're supposed to be really keeping an eye out for what's best for the public.

And we heard earlier, for example, that the CCNR ensures that the company will clean up, that it is liable for any accidents, and that the CNSC will certainly hold them to account, yet when we have this contaminated area near the tracks, nothing is done except they say that they will keep -- it is closely monitored, quote unquote. Closely monitored.

Well, why isn't it just simply removed? Why is this contaminated area not simply removed and taken elsewhere? Why do you closely monitor it? Why not just get rid of it?

So the idea that the CNSC, on the one hand, is going to be very vigilant in assuring that the company cleans up and, on the other hand, doing essentially nothing doesn't really stack up very well and does not contribute to public confidence.

Now, regardless of the judgment as to

whether it is -- how bio available it might be. I once again want to emphasize it's a question about particle size because when you prepare for making ceramics, you generally -- you know, most ceramic workers use clay. And clay is defined to have a particle size between four microns all the way down to 0.02 microns.

Now, those are called ultra-fine particles.

Now, particles of that diameter are extremely available to the deepest recesses of the lung when they're inhaled. And one could argue -- and I have no idea what the truth is, but I don't think the CNSC has any idea, either.

One could argue that this 30.9 parts per million has dropped to 20 parts per million, perhaps because 10 parts per million has been dispersed. And it may have been dispersed by being resuspended because these particles are very, very small. That's why they get out through the sacks sometimes. That's why they escape, and that's why they have to monitor the exposures of the workers.

So if it's true that 10 parts per million are -- have actually just been disseminated into the environment, this is not very reassuring. The levels are dropping at this commercial site because

they're being disseminated elsewhere or it might also be argued that, well, perhaps it's not a question of time. Perhaps it's a question of geography. Perhaps it's a question of a spatial difference.

Well, if it's a spatial difference, then if one sample will measure 30.9 and the other sample will measure 20, then why wouldn't another sample measure 40 or 50? It goes both ways.

So again, the lack of concern -- the apparent lack of concern for the fact that this was, at least at one time, very close to the commercial limit and over the residential limit for uranium and soil, the lack of action on this is astounding, I think, and not reassuring.

And it does seem to contradict the general kind of assurances that the CNSC is wishing to give to people.

Now, another thing that I would like to refer to is the lack of a proactive kind of approach on the part of the CNSC.

When we read the *Canadian Nuclear Safety and Control Act*, we hear -- we read that the CNSC's job is, really, to be a champion for the public health and safety and for the health and safety of the environment.

Also, the CNSC is supposed to have an educative job because it says in the -- right in the Act, in Article -- I believe it's Article 7 or Article 9 -- that the CNSC has an obligation not just to make available, but to disseminate objective scientific information related to their -- to the possible risks associated with facilities that they're regulating.

Well, I don't think there has been a dissemination of information that is in understandable terms.

I mention the fact that the -- if, in fact, inhalation is the main health hazard, then there should be a discussion in your own documentation and dissemination of information about the importance of alpha radiation, about the characteristics of alpha radiation and how unusual alpha radiation is because of the fact that it has such little penetrating power, and yet is much more biologically effective in causing damage.

Moreover, the importance of the particle sizes, there is no mention of this whatsoever, there is just a talk about how many kilograms or grams or micrograms of uranium are out there, as if it didn't matter what the aerodynamic diameter of the particles is, and yet that is all important in terms of

accessibility through the most important route of inhalation

THE PRESIDENT: Thank you, Dr. Edwards. We would like to -- actually you raised some interesting points that I would like to hear some discussion.

DR. EDWARDS: Excuse me. I still have to talk about the last point, which is alternatives.

In terms of proactive, I think that the CNSC should really consider -- ask yourself this question: If this was a brand new plant and wanted to locate exactly where it is now, would you license that? Would you encourage that? Would you say that's okay, or would you say, well, that's really not a good site for this kind of plant, it's too residential, there's too many people around?

Remember, the ALARA principle is to keep all radiation exposures as low as reasonably achievable, but we know that the most important radiation exposures are not the individual exposures but the population exposures. It's the person rem, it's the person sievert that matters, that means the number of sieverts multiplied by the number of people exposed.

So the population should play a role in calculating how to keep doses as low as reasonably achievable, and that means that relocation of this facility should be considered at some point in time, if not now I think is the right time to do it.

One more point, and that is that in making ceramics there are dry processes such as we have now which lead to a lot of exposure possibilities for the workers and for the public, but there is also wet processes and most ceramic makers use clay and there are wet processes for making uranium dioxide fuel is well.

Now, why would not the CNSC require the licensee to investigate the possibilities of moving to a wet process to actually produce this UO₂ powder as a wet clay for turning into ceramic rather than a dry powder which poses far more dangers to both workers and even imagine under accident conditions, the dispersal possibilities for the dry powder are far greater than they would be for a clay type of formation.

So this, again, I would hope that the CNSC would basically give a time limit to the licensee and say, look, either you should consider relocating this facility or you should consider changing to a process which is intrinsically much safer, not even

providing the opportunity for the kind of releases that we have been talking about today.

THE PRESIDENT: Okay. Thank you.
Thank you for this presentation.

--- Applause / Applaudissements

THE PRESIDENT: Any questions?
Monsieur Harvey...?

MEMBER HARVEY: I would like to hear the staff about the respiratory particle. Is this something, taking into account the nature of the plant, that has been looked at or would have merit to be looked at?

DR. THOMPSON: Patsy Thompson, for the record.

I will speak first to how it was taken into consideration to develop -- how the Ontario Ministry of Environment took that into consideration to develop the new air standard they came up with.

And so the new air standard is based on both the toxicity and the radiological aspects of uranium, and in developing their standard the MOE used the most recent lung model and took into consideration particle size and the solubility or not of different types of uranium and they based their standard on the particle size and the least soluble uranium so it would

reside in the lung the longest.

And so the air standard is developed on the most recent biokinetic information, the most recent lung model and, as we saw on the staff's presentation on slide 12 yesterday, the actual air concentrations around the GE facility are well, well, well below the most recent air standard developed by the MOE.

So the public is not exposed to particles of uranium that could cause a health impact.

In terms of worker exposures, there were statements made that workers should be aware of the risks and dangers they are exposed to. It's actually a requirement of the regulations that workers be informed of the risks associated with the work they are doing and this is a requirement of the CNSC as part of the radiation protection programs.

If you would like, Mr. Bertrand Thériault is in the CNSC office, he could speak to how for the dosimetry of uranium we do take into consideration the particle size solubility to make sure that we have a good assessment.

THE PRESIDENT: But on the inhalation -- and I would like to maybe take a minute -- in the plant itself, I understand they are

very, very aware. Don't your employees wear, in the critical places, masks and breather and all that to protect against alpha -- I thought we talked about the alpha particle yesterday.

MR. DESIRI: Yes. For the record, Paul Desiri.

Yes, we do monitor for alpha radiation. We also monitor for all the other types of radiation. All workers are informed on a regular basis of the risks and they are adequately protected against all risks.

And I would like to just continue on with what was said about standard development in terms of incorporating different particle sizes, different solubilities.

We also take the same approach in developing our standards, which is our internal control levels and action levels and limits. We take the most conservative values in each case, so the most conservative particle size, the most conservative solubilities. And all our standards and measurements and controls are geared to protect against the inhalation risk and have been shown to be effective in doing this.

LE PRÉSIDENT : Monsieur Harvey, c'est

tout?

Ms Velshi...?

MEMBER VELSHI: The previous intervener had also raised a similar issue and it's a question for GE. Where you talk about your internal standards, you know, there is a regulatory limit and then the three or four underneath that, and the question asked was around soil contamination levels and particularly the contaminated area that is of concern where you're approaching the standard and even though the CCME standard is for remediation.

Do you have internal standards and does remediation of that area make sense, that it may have exceeded an action level and taking into consideration ALARA principle not just compliance, help us understand what the rationale is for not doing remediation.

MR. DESIRI: For the record, Paul Desiri.

First, it's important to state clearly that all soil measurement results are safe. We have been monitoring for 30 years and all of our results are safe. All of our residential results for the past 30 years have been at background or lower and the area in question that we are talking about is at

our fence line, it's a small, well-defined area under close scrutiny. It's declining, you know, in magnitude. It's below the limit. Obviously if it was above the limit we would certainly want to look at taking some action.

I think it has been stated many times in the last two days these levels are safe.

MEMBER VELSHI: I'm sorry, you haven't answered my question, which was: for air and water there is a limit, and then you have your own internal levels that require you to take action at much lower levels than the regulatory limit. And so the current intervener, Dr. Edwards, has raised that we really don't know, yes, the levels have dropped, but where they have really gone and maybe they're just, you know have become airborne and have transferred.

So the question here was: Does remediation of this little area make sense?

MR. DESIRI: For the record, Paul Desiri.

My apologies. So I just want to take you back to the discussion about the different levels of protection. That applies to controls at the source. So we do that for water, we do that for air. We have limits, action levels, control levels and then

performance. That doesn't apply to soil.

In looking at the numbers, again they are safe, so there is no immediate need to do any cleanup. I think it's a question whether there is still a need to do it. I think it is something we would need to discuss, but being that they are safe and they are within guidelines there is no immediate push to do anything.

THE PRESIDENT: Dr. McEwan, do you want to follow up on this?

MEMBER MCEWAN: So I am going to follow up on that, because again I think that there is -- we have heard it discussed several times over the last couple of days, and that's the concept of the social contract you have with the community and I think you have identified this as a small area.

We know it is, by all of the modelling that we have heard, safe. Is there an argument that the social contract requires you to be creative in fulfilling your responsibilities?

MR. MASON: For the record, Peter Mason.

Yes, we take that point. I think the record shows that in our 60 years there we have constantly strived to improve our practices, our

processes and way beyond what has been expected of us in terms of regulatory limits.

And I think to your point about the social licence, we will take it as an action item to clean up that area that we know is well defined even though, as Mr. Desiri said, that it is well below acceptable limits.

THE PRESIDENT: Thank you. Anybody else? Monsieur Tolgyesi?

MEMBER TOLGYESI: These samples along the railroad, is it on your site or it belongs to the railroad section?

MR. DESIRI: For the record, Paul Desiri.

It's at the fence line. So it's at the fence line right at the property line. The soil sample results in all other areas around the rail line are at background.

MEMBER TOLGYESI: Because if it was on the railroad side you need the collaboration also. Outside the fence, is some sample taken also?

MR. DESIRI: For the record, Paul Desiri.

That's an interesting question. I mean that's not something we have looked at yet. I

think as we move into the next phase looking at cleaning that up, I think we may need to discuss it with the owner, I'm not sure. I think we would do that, for the record.

LE PRÉSIDENT : Monsieur Harvey...?

MEMBRE HARVEY : Oui. I would like -- there was a question about changing the process from powder to wet clay. Is there any possibility? Is it something possible, is it something usual and that could be done?

MR. MASON: For the record, Peter Mason.

Actually it was an interesting comment. The water in the clay is used to bind the particles. We use a zinc stearate to bind the uranium particles, it's much more effective than what water would be, so that we do use a binder.

And in our grinding process, some fuel manufacturers do use a dry process, but we already use a wet process for grinding in order to control powder from grinding the pellets.

MEMBER McEWAN: One final question. Dr. Edwards mentioned the difficulty of establishing internal contamination. How effective is urine testing in identifying that?

MR. DESIRI: For the record, Paul Desiri.

We have three different ways of ascertaining internal dose. We have urine analysis used as a screen, we find it very effective. We also use internal dose assignment based on air concentration and occupancy and we again apply the most conservative assumptions for solubility and particle size. And we also have a third method that, you know, is there if we need it.

For the record, Paul Desiri. We can use a lung counting service if needed.

THE PRESIDENT: Okay. Dr. McDill...?

MEMBER McDILL: Thank you. Going back to interventions -- I think it was, I have it as my list of questions through the day. I wonder if I could ask staff and/or possibly GE-Hitachi to compare the incineration process that's used at Blind River and the temperatures and the filtering that is going on versus the sintering temperatures involved at GE-Hitachi?

MR. DESIRI: For the record, Paul Desiri.

So I don't have a lot of knowledge about Blind River's process. I think a temperature was

given earlier today, and correct me if I'm wrong, it's 6,000 Celsius or something like that. Is that the right magnitude?

MEMBER McDILL: You can talk about the sintering process, which you do know about.

MR. DESIRI: Okay. I may defer that part to my colleague, Mark Ward.

MR. WARD: Mark Ward, for the record. So the temperatures that we process the UO2 pellets at which is called our sintering process, is around the 1,400 degrees centigrade.

MEMBER McDILL: And the incineration is substantially higher than that. Do we have a number? Is there someone in Ottawa? We are looking. Okay. Maybe we can come back to that after lunch?

MR. ELDER: After lunch we will get you --

MEMBER McDILL: Because I think the intervener raised a concern which is probably of merit to discuss to the community, the differences.

MR. ELDER: Yes, we will give you the answer on incineration, but the purpose of the incineration is not to get rid of the uranium, the uranium stays in the ash, it's just a volume reduction.

So all the controls are there to keep

the uranium actually in the ash after incineration. So we are not burning the uranium, we are burning the other things around the uranium and leaving the uranium afterwards.

THE PRESIDENT: Dr. Thompson...?

DR. THOMPSON: Patsy Thompson, for the record.

If I could, there was one question that was asked earlier about any health studies that were done on GE workers, and so there has been a study done that has included GE workers and there is also another study that was done that includes -- in relation to the questions or the issues that Dr. Edwards raised -- that included Port Hope conversion plant workers.

And so Ms Rachel Lane is in the CNSC office and could provide information on both of those studies because it has been a point of concern in terms of the GE workers.

Also, before I pass the floor to Ms Lane, there have been statements made about the CNSC's responsibility to disseminate information and I would like to refer people to the CNSC's website where there are a large number of fact sheets, information documents on radon, radiation alpha, beta, gamma,

health studies, dosimetry.

And so I think for people who want information, the information is there. All the references are provided so that people can independently check what we have done and the references we have used.

THE PRESIDENT: Okay. We would like to hear about this study.

DR. THOMPSON: So I think, Rachel Lane, you're on the -- are you able to speak?

DR. LANE: Rachel Lane. Can you hear me?

DR. THOMPSON: Yes.

THE PRESIDENT: Yes, go ahead, please.

DR. LANE: Hello. Rachel Lane, I am the CNSC's Epidemiologist.

First of all, I will talk about the study that included GE workers. It is published in the peer-reviewed literature and it is referred to as *Ashmore et al*, 1998 was when it was published. That looked at mortality.

Another study also published in 2001 by *Frost et al* that looked at cancer incidence among nuclear workers that were within the National Dose

Registry.

One of the questions that was raised was: How long has the National Dose Registry been available. It has been available since 1951 and there are records going back further than that, but the confidence starts in 1951.

With respect to mortality among the nuclear workers, cancer mortality appeared to increase with cumulative exposure to radiation, which is what is consistent with what has been found in other studies of nuclear workers and other situations looking at radiation. So the General Electric workers were included within that and the risk was similar to what has been found in the past.

Now, the doses to GE workers are low and based on the linear non-threshold hypothesis and the linear dose response relationship that has been found, when doses are low the probability of developing cancer is low. That is with respect to the GE workers.

Now with respect to the Port Hope workers. Now, the Port Hope workers were part of a large study of Eldorado workers, which included the uranium miners in northern Saskatchewan and the Northwest Territories, as well as about 3,000 uranium processing workers in Port Hope, Ontario.

Now, this study is important because when you study various different populations, whether it is in Port Hope or whether it is in other countries of similar type of workers, they are often generalizable to other populations of similar workers.

Now, we talked a little bit about alpha radiation and the concern about it within -- internal in the body. Now, when we refer to alpha radiation in this situation what we are talking about is radon --

DR. EDWARDS: No.

DR. LANE: -- and radon decay products predominantly.

DR. EDWARDS: That's not true. It's uranium.

DR. LANE: Anyway, with our workers in Port Hope, when we look at their risk of developing lung cancer; in fact, when we look at all causes of illness in our Port Hope workers, they were comparable to the general male population and, unlike their uranium miner counterpart, they did not have an increased risk of lung cancer compared to the general population.

THE PRESIDENT: Okay. I guess we will not be able to analyse those studies without

actually reading them right here. So you made reference to them, thank you, and I guess we will have to look at it.

And I assume GE can take a look at these historical studies.

MR. MASON: For the record, Peter Mason.

DR. EDWARDS: And I would like to --

MR. MASON: Yes, we would be very interested to look at that.

THE PRESIDENT: Okay. Dr. Edwards, final comments, please.

DR. EDWARDS: Yes. Well, once again, the use of the word, "safe" is not an objective scientific communication because as with asbestos, as was second-hand smoke, as with radioactive materials of all kinds, the linear non-threshold hypothesis as mentioned by the last speaker suggests -- dictates that, in fact, there is no safe level, that there is only an arbitrarily set acceptable level by regulation.

You can say it's below regulations, you can't say it is safe. That all the evidence indicates, consensus worldwide is that this linear non-threshold exposure limit means that when a large number of people are exposed to small increases of

radiation that they will, in fact, experience a small increase in cancer incidence.

So to call it safe is misleading, and I don't think the CNSC should allow this kind of language to be used because it is anti-scientific and it's contrary to the law that stipulates what the CNSC's role should be, which is to communicate, and not only communicate, but disseminate objective scientific information. That's not objective scientific information.

The other thing is that with regard to Patsy Thompson's comment that there are fact sheets on the website, the point is that when you have a facility where the primary risk is alpha radiation, why is alpha radiation not even mentioned?

In the documents that led up to the actual licensing of this plant back in 2010 there was not even any indication of internal exposure measurements, it was simply the extremity exposure measurements and the gamma radiation exposure measurements, but not internal exposure measurements.

Patsy Thompson did kindly send me a sheet of paper to -- because she had made the statement that the CNSC does measure internal exposures and I asked her for evidence for this and she very kindly

sent me a single sheet of paper which gave evidence that the way the measurement of internal exposure is done is it's done by GE-Hitachi based on air concentrations and based on time of exposure of the workers.

This is entirely inadequate because it does not take into account the accumulation over a period of years, nor does it take into account the self-contamination that can occur when you are removing your protective equipment.

When you have very fine dust like this, when you take off your respirator, when you take off your contaminated clothes, that stuff becomes airborne again and you can get further exposures that were not necessarily measured by this very crude method of estimation.

There is a big difference between measurement and estimation. What we have here is an estimation process, not a measurement process.

THE PRESIDENT: Okay. Thank you.
Thank you very much.

--- Applause / Applaudissements

THE PRESIDENT: We will take --

MS LESTER: Mr. Binder, I would just like on the record --

THE PRESIDENT: We will take a lunch break until two o'clock. I think we will resume again at two o'clock.

Thank you.

MS LESTER: I would just like to say on the record that my questions weren't answered and I would like that on the record (off microphone) Ms McDill, but the rest were not (off microphone).

--- Upon recessing at 1:01 p.m. /

Suspension à 13 h 01

--- Upon resuming at 2:16 p.m. /

Reprise à 14 h 16

MR. LEBLANC: Good afternoon.

Another roll-call, Mr. Michael Cook.

So we can proceed as they are already seated with Madam Tilman, Mr. President.

THE PRESIDENT: Okay. Thank you.

I would like to move now to an oral presentation by The International Institute of Concerned Public Health, as outlined in CMD 13-M 51.59, and 51.59A.

And I understand, Ms Tilman, you will make the presentation. Please proceed.

13-M51.59 / 13-M51.59A

Oral presentation by

International Institute of Concern for Public Health

MS TILMAN: There you go. I should know better by now.

Good afternoon, Members of the Commission. And we appreciate the opportunity to make this presentation.

With me is Dr. Gordon Albright, also of the Institute, and he will be assisting in answering questions that you may pose.

So, with that in mind, the reason that I am here personally as well, is a concern for the nature of the operations at this plant and the impact of these operations on the health and well-being of the local community, and on workers.

Sorry, I have to go back one. You have heard the descriptions of the facility at various times so I will go through this very quickly. It has been sixty years, almost, in operation. It was converted from a former GE facility. I'm not sure what retrofits were done in all this time to make it suitable for making these pellets. I think it would be

good to know what this is doing.

You will notice that while the pellets are shipped to the GE Hitachi plant for fuel bundles for the CANDU's, some, and we don't know how many, are also shipped to a GE facility in South Carolina. And we hope to get some clarification of the nature of how they may be used.

We are here because of community concerns that have made this a very public issue. The concerns have ranged from lack of transparency about the plant, and we have heard a lot about that from other interveners. Also, the nature of the vicinity of the plant has been transformed. It has transited to a highly residential area, quite different from what it was certainly in 1905 and in 1955. So there are concerns about this plant, the potential for adverse health effects, the transportation issues, emergency evacuation plans -- Where are they? And a big question the communities have, and we have as well, What have government agencies done? Have they done enough to protect the health of the community?

And while I'm on this, several questions:

What studies have been carried out long-term on workers in the plant, not just during

their time, but long after they have left the plant?

What levels of exposure of uranium and other hazardous substances have been exposed in the legacy of the operation of this plant, not just the last few years?

What about residents, children?

People move in and out of the plant -- it would be very hard to track if they had any long-term effects.

What role has Toronto Public Health, provincial health, public health departments, and Ministry of Health, MOE, Health Canada, CNSC, other agencies have had with respect to this facility? It hasn't been very clear to the residents. It's not clear to me, certainly.

Were the residents made aware of this facility before moving into this area?

Has the facility filed an evacuation emergency plan when it first operated? And have these plans been updated, with community involvement? Some concerns have arisen about there.

Also, at the time that this plant was built what were the standards? Because, it was only in 1997, approximately, when the *Nuclear Safety Act* came in, that prior to that time the public dose was 5 millisieverts and then it went to one millisievert. We

have no idea what's happened in the early years. So, these are some of the concerns.

You have heard some discussion about uranium health effects and the various routes of exposure. Dr. Edwards and others have presented on this so I'll just go over this very quickly. But, it's very important. Uranium is an alpha emitter and, yes, while external radiation is not the critical thing, it is internal nevertheless. It just takes one, an alpha particle in any part of the body to create possibly a problem that won't emerge until many years later. And while its kidney toxicity has been the predominant effect that has resulted in air standards by MOE, if you add onto that the cancer effects, the radiologic effects, not just cancer but other haematological disorders, you have a problem here.

And, also, there's the cumulative effect over a long time. There's vulnerable populations which are most sensitive, and workers who are directly exposed to this radiation.

I'd like to turn to the CNSC staff report which I have reviewed a good element of, and in particular because of the meeting today being with GE Hitachi, looking at what was provided in the report and the license limits. And we've heard mention of these

limits being overly generous, to say the least, and the license limits -- it's come up already -- discharge to sewers.

Now, nine tonnes a year being allowed is one thing. We understand the facility doesn't emit in that order. But 2.7 or two kilograms per year -- we're talking about a very dangerous substance. And it is beyond belief that CNSC will still keep those license limits. In fact, you were reviewing license limits, derived license limits last year. I remember we responded to a paper on a review of these limits.

We really urge you to look at these limits the way we, as the public, look at them, too, and say these are really permissible. What if there were an accident? What if GE Hitachi did release anywhere near that amount? It would be permissible. But is it human? Is it acceptable? What happens if they were to emit 8500 kilograms? What would happen then?

This is allowing something that may happen. Accidents happen -- we don't know. But, this is an allowable limit, it's not a limit that encourages reductions of emissions by any means.

So, feeding onto that, this slide just talks about the relevance to actual emissions.

And the public is really not informed. There's calculations done to determine these limits, derived release limits. They are also built on models, but they don't provide a meaningful basis for determining the so-called safety of the plant. And there's no confidence that the oversight by CNSC isn't adequate to ensure public safety.

I want to turn to something that I found very astonishing in the report, in the staff report.

I want to turn to this what was called the equivalent dose exposure for extremities and skin. I've been on the CNSC website to find further information about this metric, but I think I've figured it out. But then I see that for uranium processing facilities as extremity and skin doses set at 500 millisieverts per year.

Now, that is a number which should shock people that are used to seeing public doses of one millisievert per year, or for workers 20 millisieverts per year cumulatively. No more than 100 millisieverts in five years.

The differences in the use that I've tried to underline here of equivalent versus effective. This is something that would be very obscure to the

public, and this does need some clarification.

Now, when we talk about GE Hitachi
Toronto --

THE PRESIDENT: Can you please stop
videoing, you're disrupting this hearing. Can you
please stop it.

MS TILMAN: Yeah, I just want to --
this is an important slide and it's important for me to
get through.

THE PRESIDENT: Can you get off?

MS TILMAN: Yeah, if you don't mind.
Yeah, so I can talk about this issue, it's very
important.

This is something of which there has
been no transparency -- sorry, I'm going to have to
repeat a little bit of this, okay.

THE PRESIDENT: Thank you.

MS TILMAN: Okay. When I saw this, I
did go to CNSC's website to check if this were
available, the definitions were available there. I
couldn't find a definition, but I have done about
calculation from effective to equivalent doses to
figure out where the 500 came from, and I think I might
be right, but I'm asking the question, How was this
metric determined? What is the justification of its

use? Where else it's being used in the world? I can't find out when I check documents, international documents -- only in this report.

I was also made aware Blind River of course being a uranium processing facility also has this kind of metric.

Now, talking about GE Hitachi, I'll go to the second point there. The maximum what's called extremity dose was 357.29 millisieverts in the year of 2012. So, this was received by one worker. It's the highest level over all nuclear facility processing plants ever. There's an action level of 350.

Now, on what basis can CNSC find this level of exposure safe? What is extremity? What extremity was exposed? I mean, I'm thinking extremities -- nose, hands, feet. I mean what kind of protection did this worker have or not have that led to that dose?

How does one know that there wasn't any alpha absorbed by this individual, that the only -- how can one assume that the only thing that was affected was some extremity? And, as I said, I don't know, I'm assuming it's hands, but I could be wrong. But what kind of protection did people have?

I find this particular thing astonishing and not clear. So, it's obscurity on the part, and I have tried to figure it out.

Now, going to the actual report itself, because it was scoped for the four years, when you talk about a plant that's been in operation for decades you don't get a sense of what really went on in the plant. And I know there's been other yearly reports, but a plant like this, with its length of time needs some history, it needs some context to know what was going on because there's a legacy issue here, okay. And there's no tracking of that history, of that legacy and, hence, there's no ability to analyze the cumulative effects that have happened over the time on the environment.

There's no indication of what kind of retrofitting or modifications or changes have been made to this facility to improve its performance. No information on the quantity of pellets that are made or shipped to the plant in North Carolina.

Now, I noticed in the staff report when I was looking at the mining information, the mining -- I could find the quantities that were actually mined. I can't find the number of pellets that were mined. I think if you're going to do a

report it should be looking at the same parameters, throughout the report, for all your facilities.

THE PRESIDENT: Can you please hurry up. We have got your -- we have got your documents. We have got your presentations, so could you please close down?

MS TILMAN: Yes, I'm trying to do the best I can. There's a lot of pressure, okay. And if you don't mind, I'd like to continue.

THE PRESIDENT: You've been with us long enough to know the rule of procedures here, so please respect it, okay. So please go through them a bit faster. We have read them and we would like to ask some questions.

MS TILMAN: Definitely.

AUDIENCE MEMBER: We need to hear this.

MS TILMAN: Okay.

--- Shouting from audience

MS TILMAN: All right, I will do my best. The soil -- I would like to go into the soil report and these are guideline numbers that are produced by the Canadian Council of Ministers of the Environment. I'd like to stress these are guidelines, they are not legislated limits. And the Ministry of

Environment has just adopted these guidelines. There are limitations to these guidelines and you can read this from the slide. There's lack of Canadian specific data.

These values -- when you see values like this, there's no confidence limits to them, they just give a number. They don't say plus or minus so much to allow for any variation.

Exposure pathways. Not all exposure pathways were evaluated, and so on.

And the 300 milligram per kilogram guideline for industrial sites is not appropriate, especially considering the density of the population in the area.

I won't belabor these. These are the numbers that were produced. I will go to a critique of these numbers since that would get me through this faster.

These sampling results. This is a one-time sampling result that was done, I believe, in June of this year. Several factors can influence a sampling, especially a one-time sampling from weather, irregularity of soil, depth, and so on. There has been no consistent frequency of sampling and testing that's been reported -- a one-time shot.

The guidelines. The CCME guidelines themselves have not been updated and they are very limited as noted.

And we have heard before this, that there's two different methods that were used at different locations, and you cannot reliably conclude that there's no adverse health effects.

CNSC findings overall have rated the facility as satisfactory, and fully satisfactory. The soil samples reports key finding is uranium levels pose no risk. We don't find this justifiable, and unsubstantiated.

So, in conclusion, the lack of transparency of this facility operations is unacceptable. Public right to know supersedes industrial interests.

Maintaining this facility in a residential area is unacceptable and the key findings are not credible and for the residents, their concerns will not be alleviated by such findings.

--- Applause / Applaudissements

MS TILMAN: Therefore, it is really regrettable that the license for this facility was extended to 2020, given all the issues and concerns regarding this facility and the length of time it is

operating.

We recommend that this facility close its operations well before its expiry -- this date.

AUDIENCE MEMBER: Yes.

MS TILMAN: Well before. And then detailed commissioning plans be developed with community involvement.

Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

MS TILMAN: Oh, that's --

AUDIENCE MEMBER: There's four things she just forgot to --

THE PRESIDENT: Thank you.

MS TILMAN: I'll save it for later.

THE PRESIDENT: Questions.

M. Harvey?

MEMBER HARVEY: Can you comment about the maximum extremity dose of 357.5 millisieverts per year? Could you comment on that, and is it correct to say that that's the highest level in the industry?

MR. DESIRI: For the record, Paul Desiri.

So, this -- I need to explain the difference between equivalent and effective doses,

because I think that was one of her questions. Because, it's important to understand that the numbers -- you can't compare equivalent and effective doses.

So, one is threshold based. Equivalent doses are threshold based. And effective doses are risk based. So what that means is, with risk based doses, your risk is proportional to the dose received.

With equivalent for deterministic -- if you're below the threshold, there's no effect.

Now, the actual dose limit has a safety factor built in, and this is below the dose limit. So, it's a safe exposure.

MEMBER HARVEY: Staff, can you comment?

MS RICKARD: Melanie Rickard, for the record.

So, I'm going to start by trying to describe both the effective dose and the equivalent dose. Understandably there is some confusion surrounding this because we have two quantities that are in our *Radiation Protection Regulations*, and both quantities have the same unit. So, understandably, there is some confusion.

Dose limits are prescribed in the *Radiation Protection Regulations* for effective dose, and equivalent doses to the skin, the hands and feet, and the lens of the eye.

First, the effective dose takes into account the fact that different organs and tissues vary in how they respond biologically to radiation. And this difference is expressed in terms of tissue weighting factors that are also listed in the *Radiation Protection Regulations*. The weighting factors consider the susceptibility of an organ and tissue to cancer incidents and cancer death, for example.

So, the effective dose provides a single quantity upon which to base the protective limits to reduce the likelihood of the effects. So that's the quantity of the effective dose. That is the 1 mSv public dose limit, and, for example, the 50 mSv per year, 100 over five years, for workers.

Now, because certain tissues on the surface of the body, such as the lens of the eye and the skin, show different types of effects -- for example, the skin burns at high doses, for example, and for the lens of the eye, cataracts.

Because of these effects -- and the gentleman from GE correctly described that these

effects are said to be expressed above a certain threshold -- we set limits which are called equivalent dose limits for the lens of the eye, the skin and the skin of the hands and feet, based on those thresholds, and the dose limits do build in a safety factor.

So, for example, the dose limits for the hands and feet, to protect the skin of the hands and feet, are 500 mSv per year for a worker where we know that the threshold for skin burns is at the lowest at around 7 sieverts. So that's 7000 mSv.

THE PRESIDENT: Where is that? I think the intervenor wanted to know where to find it. Where is it all found?

MS RICKARD: Absolutely. I was getting to that.

It's found in the *Radiation Protection Regulations*. It's described in a document called "The Introduction to Dosimetry," which is INFO-0827. That's posted on our website.

And I would also like to add to the record that these limits are also used by the ICRP, ICRP 60, most recently ICRP 103, and in the IAEA BSS. So these limits are used by countries all over the world.

THE PRESIDENT: Thank you.

MEMBER HARVEY: Yes, just another question to GE. It's about the quantity of pellets going to the U.S., North Carolina, and what is the use of those pellets there?

MR. MASON: For the record, Peter Mason.

I'll start by saying our licence is for 1800 tons a year. Typically, we produce approximately 800 tons a year of pellets. Of that, 50 tons approximately -- because it can vary slightly from year to year -- approximately 50 tons is shipped to our parent company in Wilmington, North Carolina.

And the reason they require the pellets is for BWR -- that's a light water reactor -- fuel rods. The fuel rods are approximately 12 feet long and to balance that or to get the appropriate isotopic profile along that 12-foot tube, they insert natural uranium pellets in order to achieve that profile.

And I know that there's been some question about what we mean by "natural uranium." For us in the industry that means it's material that has 0.7 percent of the isotope U-235. So that's what we refer to as natural uranium.

MEMBER HARVEY: Thank you.

THE PRESIDENT: So it goes into power -- again, electricity production in the States?

MR. MASON: That's correct. It's used in the production of fuel rods for BWR reactor fuel which is used in the United States.

THE PRESIDENT: Thank you.

Monsieur Harvey?

Anybody else?

Dr. McDill.

MEMBER McDILL: Thank you.

Going back to the extremity dose of 357, that was over an action level of 350, if I heard correctly? So there is a report somewhere on the website for 2012 or is it personal information, this particular thing? Usually we get an early notification report.

MS PURVIS: For the record, Caroline Purvis, Director of Radiation Protection Division.

Yes, this was reported to the Commission, but no, we don't do early IR for this particular type of incident.

MEMBER McDILL: But it was reported to the Commission?

MS PURVIS: Absolutely.

MEMBER McDILL: And since the

intervenor asked, and I believe someone yesterday asked also, the individual is fine.

MS PURVIS: Yes.

MEMBER McDILL: Going back, and since the action level was exceeded, what was the action taken by GE Hitachi to -- what corrective actions were taken?

MR. DESIRI: For the record, Paul Desiri.

So, I should explain a bit about the way in which this dose is determined.

So it is to the hands. That's how the hand exposure is measured and that's how it's compared at the extremity dose limit.

The actual process that this operator uses, they use their hands to manipulate the pellets. In this particular situation there was a -- we were undergoing a quality situation, so there was a lot more inspection required than normal.

So, it just so happens the rings are an interference with that task. So we do a sample of one week per quarter and then we extrapolate that number. We take a conservative estimate so that we make sure we don't underestimate.

But in that case the sample period

was during the time when the quality excursion was happening and there was a lot of manipulation by hand.

So there's a couple of issues here.

One is getting more representative weeks in situations where you have a higher fluctuation than normal. There's been an action level around that.

The second is the implementation of a control level to give earlier indication of this potential for higher numbers. That's been implemented.

And the second is looking at the actual task that the operator does for this particular inspection during a quality excursion and that's been dealt with.

And the fourth is connecting the hazard analysis with change control and that's also been completed.

MR. RUITER: (Off mic).

THE PRESIDENT: Anybody else?

Dr. McEwan.

MEMBER McEWAN: So we've heard a lot and there was a helpful slide and a helpful abstraction in your submission around the soil levels. And we've heard a couple of times that the monitoring in the boulevards in the community have demonstrated levels that are equivalent or close to equivalent to

background.

Perhaps somebody from staff could explain what that means and how reproducible that would likely be if you went to multiple different sites across the city.

MR. RINKER: Mike Rinker for the record.

When we were making comparisons to background, the Ontario Ministry of Environment published and since revised a document describing what are Ontario typical range values, and there are values that are published for urban settings and for rural settings. So I think our understanding of what background is in Ontario is fairly solid.

The values that we've observed around GE and that MOE has observed around GE in the residential area are within that range, with the exception of two that are close to the facility that CNSC analyzed. There were two values that were slightly above background, in the 2.53 and 2.9.

So the pattern is what we would expect and I would expect as you move away from the facility, they would remain within background. So I think they would be -- the methods that were used were appropriate. The analysis was appropriate.

MEMBER McEWAN: So, could you explain in lay terms what "background" is?

MR. RINKER: Mike Rinker for the record.

So, uranium exists in all solid geological materials in varying levels. Crystalline rock like granite rock has high values of uranium. Sedimentary rock such as carbonate rock that's in the Toronto area has uranium in it. So it does occur naturally. It occurs throughout Ontario, independent of the nuclear industry.

And so when you observe background values, what you're observing are the values of uranium that exist if there was not a uranium industry.

MEMBER McEWAN: So, does that help some of the intervenors in understanding the relationship of the measured values to values you would get on the other side of Toronto?

MS TILMAN: Not -- I don't think it helps really at all. I'm very well aware that background, of the implications of background, that we have naturally occurring radium -- uranium. I'm well aware of that. However, these measurements are taken after the plant has been in operation, so it's very hard -- we don't have a base by which we can compare it

with, okay, before the operations.

Secondly, as I've tried to allude, how these measurements are taken are not consistent. Also, we have the other factor that the uranium will have travelled. So even though you may sample around there, around the plant further on, there's no sense of how much might be deposited further on or over time what has happened.

So to say something is below background makes absolutely no mathematical sense. You know, your background is whatever the base is. But we don't know the true background of that area before the ground was disturbed, before anything happened.

MEMBER McEWAN: So, let me understand. If you have measurements across the whole of Ontario, which I know we have, and they are consistently the same across the whole of the province, with a small amount of variation --

AUDIENCE MEMBER: (Off mic).

MEMBER McEWAN: I'm sorry?

AUDIENCE MEMBER: (Off mic).

MEMBER McEWAN: -- why would you expect the base values around the plant to have been different 100 years ago then two miles away?

MS TILMAN: There is a range in

background levels because of the rock structures of our province, of the country. It can range quite a bit. Background levels can range a fair amount. Now, when we're talking a fair amount, they could range from maybe 2, 2.5, 3. That could be enough to affect these levels that are measured here.

I'm not sure, some of them could be natural background, some of them could not. I think it's very hard to filter out the differences because you don't have -- the variation is such that you don't have the ability to filter out the difference between the plant being there or any depositions left from air depositions and not. It's too hard. It's too variable. I think MOE would agree that there's quite a variation within a range of background levels.

DR. ALBRIGHT: I think there's another very important point that needs to be made here and that is that background radiation, like all radiation, causes disease and deaths, and any additional radiation that you add to background radiation causes additional disease and deaths. So the fact that radiation is comparable to background does not mean that it's harmless. On the contrary, all additional radiation causes harm.

THE PRESIDENT: So, let me understand

now. Across Canada, the average is, I don't know, 1.8, 2.5 mSv and we're all slowly dying; is that your assumption? Is that was you just said?

DR. ALBRIGHT: No, I did not say we are all slowly dying. I said that whenever we add radiation to the environment people die who would not otherwise have died.

THE PRESIDENT: No, but the Canadian variation here now --

DR. ALBRIGHT: By your safe standards supposedly, which is 1 mSv per year, that is based on one additional cancer per 20,000 people. Now, if you take that -- and of course, the other thing is this radiation stays from uranium and transuranics for the lifetime of the earth.

So, when you consider the total casualties that are going to be caused over the lifetime of the earth by all this, it represents a very large number of people. Over 20,000 years, one excess cancer per 20,000 people represents the average population of the earth over that period of time.

This is a number of additional deaths that dwarfs all the human slaughter that has ever taken place in the world, including all the wars that have ever been fought.

So, this is a very serious issue. Just because these people have not yet been born and have no voice does not mean that they don't matter.

THE PRESIDENT: Okay. Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Thank you. Thank you for your intervention. You have the final word.

MS TILMAN: I think the final word would be the conclusion there, I think, no matter how you cut it, the information that's given the one-time kind of testing due to pressure from residents does not give comfort to people that this is a safe operation. It is not a safe operation. Please reconsider the licence requirement there.

The other thing I have to say is I'm astonished at what I've heard about the extremity dose. I'm very well aware of the difference between effective and equivalent doses. I'm done my homework on this. I don't like to be talked down to on this. Those tissue factors are only approximate. We still don't know why did this worker only work with hands, with no protection. What is going on?

And finally, just a little comment.

Ms McDill, you were asking about something that you think the public would like to know

the difference between becquerels and grams. Well, we have the answer for you but it wasn't --

MEMBER McDILL: I know what the difference between becquerels and grams is. I was asking basically for the sewage system. We have one that's quoted in grams and we have another intervention that's --

MS TILMAN: Right. Okay. Okay.

MEMBER McDILL: So it's a different thing.

MS TILMAN: Okay.

MEMBER McDILL: And I think when we ask something about the difference between, say, effective and equivalent, we're not necessarily assuming that you don't know the difference but there's a broader community here who may or may not know the difference.

MS TILMAN: I appreciate that because it's a very complicated issue.

But I think that I am leaving here with a lack of comfort over that kind of level. How is that worker going to be tracked? One can say they're okay right now. You don't know what's going to happen. How can you be definitive that no other part of the body or anything else was absorbed because you're only

using the tissue factor of .01 for skin or eye?

I mean this is -- you asked me for my -- I'm left feeling uncomfortable about this.

MEMBER McDILL: Mr. Chair, can I just pursue that one a little bit longer since I was the one who raised it?

THE PRESIDENT: Okay, very quickly please.

MEMBER McDILL: Yes.

Two questions.

One additional cancer in how many? And then -- he said 20,000. That's what was said.

And then, any worker who exceeds an action level, how is that worker tended to in the years that follow?

DR. THOMPSON: Patsy Thompson for the record.

I'll try to respond to the one cancer in 20,000 and then Ms Rickard will talk about tracking of workers following an exceedance of an action level.

So, in terms of cancer risk, the values that are given are provided for the use of the linear no-threshold model and the public dose limit or the worker dose limit depending on what is being done.

We have done a study of more than

40,000 Canadian nuclear workers who have been exposed to several sieverts of those over a very long period and that study shows that there is no relationship between cancer incidence or cancer death and radiation exposure. There is no relationship between cancer mortality and tritium exposure.

In terms of the information that was provided by the intervenor in terms of natural radiation causing thousands of people to die, across Canada the natural background radiation varies between 1.8 to about 4.7, and in Colorado, for example, it's in the high teens, so in the 15 to 18 mSv per year.

There is no difference in cancer incidence or cancer mortality between an area like Colorado that has 18 mSv per year of background radiation and areas that have 1 or 2 mSv of background radiation.

So this is simply not an appropriate statement and it is an inappropriate use of the linear no-threshold relationship.

MS RICKARD: Melanie Rickard for the record.

Each licensee is required to ascertain doses for the workers and in the case of GE, they used dosimetry for the whole body external

exposures, the extremity exposures and the internal exposures, including radionuclides that emit alpha radiation.

All of those doses are tracked by the licensee and they are required to maintain those records for quite a long period of time. If an individual ever wants to go back to the licensee and retrieve their records after the fact, they can, and in this particular case we know the dose records are also in the National Dose Registry, which is available for anyone at anytime to retrieve their dose history in this particular case.

But as we've mentioned, not all doses go to the National Dose Registry. Regardless, the licensed dosimetry service, if used, and/or the licensee has to keep those dose records.

THE PRESIDENT: Okay. Thank you. We have to move on. Thank you very much.

DR. ALBRIGHT: I'm sorry, I can't leave Patsy Thompson's comments unanswered.

It is well known that a single alpha emission with any human being can cause a cancer. It is absolute -- it's beyond credibility to claim that exposure to radiation causes no additional cancer, as Patsy Thompson is. This is -- there's absolutely no

scientific basis for this. There's no basis in experience, no basis in logic, and it reflects on CNSC's scientific credibility that they allow statements like this to continue to be made in their name.

--- Applause / Applaudissements

THE PRESIDENT: Thank you.

The next submission is an oral presentation from Mr. Miguel Avila, as outlined in CMD 13-M51.63.

Mr. Avila, the floor is yours.

13-M51.63

Oral presentation by Miguel Avila

MR. AVILA: Hello. Ola! Bonjour.

Wasego(ph).

My name is Miguel Avila. How are you today?

MS LESTER: I want to say for the record that I found the answer for the low dose information that we talked about this morning that Dr. McEwan wanted me to give you and I'd like to make sure that you see the picture on the front of this book. It's the same book from Chernobyl that I mentioned. If

everybody in the room would like to look at the birth defects of the children from Chernobyl. I want to make sure that everybody sees these photos of some of the children from Chernobyl.

THE PRESIDENT: We are quite familiar with those photos. We are quite familiar with this book. So thank you for this. We are familiar with the photos.

Mr. Avila.

MS LESTER: (Off mic)

...environmental health and human rights...

THE PRESIDENT: Mr. Avila, the clock is ticking.

MS LESTER: (Off mic) ...these pictures.

--- Applause / Applaudissements

THE PRESIDENT: Mr. Avila, are you --

MR. AVILA: Oh, sorry.

THE PRESIDENT: It's on your time.

MR. AVILA: How are you today?

So I have a very important request to make. I feel that I will be more honoured that I allow my good friend Davyn to speak with me together. I would like him to be brought here to the front and we can address --

THE PRESIDENT: He's not the intervenor. We have a list of registered intervenors. You are the intervenor. Please say your piece and move on.

AUDIENCE MEMBER: (Off mic).

MR. AVILA: How about he sit down with me?

AUDIENCE MEMBER: (Off mic).

MR. AVILA: He's from this land. He owns this land. He never asked for --

THE PRESIDENT: He can sit with you as long as you make the presentation.

AUDIENCE MEMBER: Thank you. Especially for a first-time intervenor it's nice to have support.

MR. AVILA: Okay. Ola! Bonjour. Wasego(ph).

So my name is Miguel Avila and I'm joined by my good friend Davyn because I feel that he hasn't been respected by society, especially white people like yourselves. So I would be honoured to share my piece of the issue today.

Thank you for the opportunity.

I've lived in this city for approximately 24 years in Toronto and I have three

small children and I am concerned very much for their safety.

I speak regularly at City Hall and in Toronto Police Services Board, but I have never come to understand how secure we live in Toronto in case of an emergency. I wasn't aware really. Anyway, 24 years I spent living in this lie. Finally I realize how dangerous is this facility located at Lansdowne, 1025?

So when I say I'm shocked and I'm really, really shocked that in the middle of our city in a residential neighbourhood, how is it possible that you can put a factory that produces uranium pellets to be shipped to other nuclear stations around the province and the United States?

I feel that the presence of the lack of evidence for the third parties who were supposed to provide information, but they are keeping it secret, the good folks from GE-Hitachi right there to my right. So I'm really scared if I don't know what is the third-party results of the air and soil testing.

Like everybody who has spoken today, we feel that there is no accountability and transparency in this process. Our good friends from GE-Hitachi are stone cold people, they don't care about the community, but just to make a profit at the cost of

the lives of the people.

AUDIENCE MEMBER: That's right.

--- Applause / Applaudissements

MR. AVILA: And, moreover, you have taken it free from the land that belongs to the natives of this country. Shame on you!

AUDIENCE MEMBER: Shame on you!

AUDIENCE MEMBER: Shame!

AUDIENCE MEMBER: Shame!

AUDIENCE MEMBER: Shame!

MR AVILA: So I guess, how many minutes I have left?

AUDIENCE MEMBER: Five.

MR. AVILA: What can I do? Okay. The reason why I ask again to have my good friend Davyn(ph) to join me is because he is a member of this nation long before you people arrived in the Mayflower.

I am a guest, I consider myself a guest in this land. I am very honoured to live in his land and I want him to listen to me because how much I appreciate his friendship, how much I appreciate the family I have found with good friends, good friends who care about the community and the lives of other people.

So I want to also say that Toronto

Public Health, two days ago I spoke in front of the Toronto Public Health Board and I asked them to request GE-Hitachi to release this information that you are keeping from public -- it's a secret that really one day it's going to explode, because like everything happens, like Mayor Ford denied not smoking weed -- I mean crack, and then six months later he goes around saying that he smokes crack.

Anyhow, so you see what happens at the end of the day the lies are exposed. It takes brave people like us, social activists for discovering what's going on.

--- Applause / Applaudissements

THE PRESIDENT: Okay. Thank you.

MR. AVILA: Are we done?

THE PRESIDENT: Yes. Thank you very much.

MR. AVILA: Mucho gracias, senor. I appreciate very much.

THE PRESIDENT: Thank you.

Questions? Does anybody have a particular question?

AUDIENCE MEMBER: That wasn't 10 minutes.

THE PRESIDENT: Okay. Thank you.

AUDIENCE MEMBER: (Off microphone).

This is his territory, he's going to speak for the people (off microphone).

MR. AVILA: Would you like him to say just one question? It's very important, because --

THE PRESIDENT: Just quickly.

MR. AVILA: Okay.

MR. CALFCHILD: Thank you.

MR. AVILA: Thank you very much.

MR. CALFCHILD: First and foremost, you're on our territory, remember you are guests. I want you to know that it was us that did that rail blockade last year in the name of the Committee for the Future of Generations of Northern Saskatchewan.

--- Applause / Applaudissements

MR. CALFCHILD: Last year -- yeah. I want you to know, Paul, you didn't consult Indian people about that plant. We never surrendered our land or our territories and you need to consult our people and our government if you want a licence to be on the Iroquois -- traditional Iroquois land. I want you to first and foremost know that.

And I want the people to know that last year a bunch of people walked from Saskatchewan -- Northern Saskatchewan, the place where you're taking

that uranium, and when they came to GE last year that they were denied entrance and we were forced off almost by the police and heavy security, which you claim that you're in for consultation with the public, and when those people walked from Saskatchewan you wouldn't even accept a letter from those people who walked --

AUDIENCE MEMBER: Yeah!

MR. CALFCHILD: -- from Saskatchewan, on our land and on our territory.

THE PRESIDENT: Okay, thank you.

Thank you very much.

MR. CALFCHILD: And I'm a hereditary Chief.

THE PRESIDENT: I would like to move on to hear from the Parkcrest Tenants' Association as outlined in CMD 13-M51.65 and M51.65A.

I understand Ms Sharon Gawtreay will make the presentation. Please proceed.

Just for the record, we have read your extensive presentation. We have read it, so you have 10 minutes to summarize your presentation to us.

Thank you.

13-M51.65 / 13-M51.65A

Oral presentation by the Parkcrest Tenants' Association

MS GAWTREY: Yes. Yes, I appreciate that. Okay.

Well, first of all, thank you very much for allowing me to be here, however I don't really see how this is representative and that of the people who actually live around the GE-Hitachi plant. I don't see the families, the homeowners, their children. I would actually be very interested to hear their viewpoints as opposed to just professional government workers and professional activists --

--- Applause / Applaudissements

MS GAWTREY: -- and that. So I see some legal liabilities here for you and that. However, as you've invited environmental activists out, I'm from Guildwood and that in Scarborough Village. I have run the Parkcrest Tenants' Association for 10 years and that to address social housing property standard issues and that.

Our families actually are gone way back, actually to the Guild Inn. This is a regeneration, the *Royal Commission on the Future of the Toronto Waterfront* that was published in 1992 -- '91. My mother was actually approached when she was a secretary of the Guild Inn for the Bitove Corporation,

they had a 99-year lease and that with the City of Toronto and that to run the Guild Inn property which is very beloved out there.

The groundwater contamination from the Pickering Power Plant had actually spread 11 km out there. John Bitove who runs the SkyDome, very well known, he wanted out of his 99-year contract, so former Councillor Brian Ashton, whose name is in here along with John Bitove, approached to my mother to give depositions and that at City Hall and that to get them out of the lease and that which she did on the promise that the City of Toronto and that would step in and take over the property.

Instead what happened, after she gave the depositions, is that the City came in, shut down the property and we were vilified and that for the next 20 years and that on the groundwater contamination and that, because the residents out there are aware of it and that, but they don't want their property values to be lowered.

The same with the residents and that in the Port Union Road area. It's very well known and that. So in any case, so that's how I have continued and that with the environmental activism and that because of the issues that -- right now I'm also with

the Scarborough Village Neighbourhood Association Partnership. I have noticed that the Ontario -- the Office of the Emergency Management and that for the City of Toronto doesn't seem to be here. This is their only 'get ready, emergency ready' brochure that actually has one little paragraph in here.

"Nuclear power accidents.
Toronto's neighbouring
Municipality of Pickering is
home to the Pickering Nuclear
Generation Station. Authorities
will provide detailed
instructions regarding what to
do in the event of a nuclear
accident." (As read)

We don't have any, you know,
pharmacies and that set up and that in Toronto at all,
and that whenever there's an issue out there the media
always has -- we're located -- the Pickering plant is
located 35 km away from the City of Toronto, it's
actually 3.2 km away from our boundary lines and that.

This is Durham's "Are You Ready?"
There is no mention in here on nuclear and the only
brochure that actually has anything to do with nuclear,
which a resident in Scarborough brought to my attention

and he was up near the zoo, and that is a Nuclear Power Safety and that which has a pharmacy set up in here. I tried with OPG and that to set up some pharmacies and that in the Scarborough area and they said they're working on it.

They have been working on this for nearly 50 years and that. So anyway, to get into my presentation here, first of all -- actually I'm going to skip over this one, I'm going to go to this one first.

With the background radiation and that investigating why the radon levels and that are so high, it actually turns out that from the 40s to the 70s there was atomic testing and that from the States that actually swept up in an "S" pattern over the whole of the States. So whenever you're quoting your figures and stating it's natural radiation levels, you're actually talking about nuclear atomic testing that's in the background environmental ready, that's not natural radon and that.

So that is an issue and that. That actually makes a good environment, especially up in here. Now, we are not included on this particular map because it's from the U.S. perspective, but we're actually in the red around the Great Lakes. It's very

high and that makes a good place and that to build nuclear power plants and to have the production.

Number two, and that was Fukushima, which GE-Hitachi and Toshiba actually built that reactor right around the same time as the Pickering Nuclear Power Plant and that was just very archaic technology now, it was invented in the 1960s and that, you know, along the Kennedy era and that and also the Apollo space program which, as everybody knows, is now in museums and that around the country and that.

This is nuts and bolts that's been put together, it's archaic, outdated nuclear technology and that CANDU reactors are -- you can't even peddle these to other countries except the Third World countries, and that and you know that.

And also in your plants right now and that actually are not even worth retrofitting and that it would be too expensive, that's why you're not even going to do -- you know, change over the pellets and that to do it properly.

And the fact that, you know, I heard here today that somebody is even handling this reminds me of the radon girls who were told to lick their pencils and that, to actually paint the dials and that with tritium, and we all know what happened to the

radon girls.

And actually that's one of the reasons why at Yonge and Dundas they actually have it fallow there and that, they built the square, because that's actually where one of the watch factories and that was located and that.

In any event, for the nuclear fallout, it only took 10 days and that to sweep across and not two years and that, so you have known for a couple of years what's going on.

Other power plants have actually reported spikes all the way across, so that this means and that that your levels are going to be spiking as well and that this is a legal liability for you and that, you know, any nuclear plant now because the cancer deaths are going to be increasing and that, so it's just logical that you would want to actually relocate and that needs taxpayer funding if possible and that, because you are a public/private partnership and that, with the Crown and that, and that's the whole purpose of having these vehicles and that to transfer public funding into the private sector and that, without the public knowledge because most people don't realize that the Crown is actually allowed to run for-profit corporations as long as they don't use

public monies and that.

In any case, all along here there is a 30 to 70 percent increase and that through different magazines and environmental monitoring of species going down and that because radiation always targets the reproduction glands and that.

Now, we can see here with the GE-Hitachi you're located on prime real estate downtown. Right now you can see legal liabilities right here, here are fire trucks that Google Maps captured, there's three in here, and you can't see the other two there. Not a good sign if anything happens.

You can see the condominiums that people have discussed. This is right around the corner and that, so it actually is an optimum time, however this would actually be a brown field and that, which normally the Crown leaves fallow for at least 20 years and that.

Now, you've got the similar situation up in Peterborough, an even larger piece of land that's huge, right also in mixed residential.

Now, to go -- when somebody brought up McClure and they weren't talking a couple blocks away from GE-Hitachi, they were talking actually about the Ivanenko Farms back in the 40s where they got

tailings and that from wherever, put it on the crops and that in an effort to make the crops grow larger.

Well, they only got cancer and the RCMP raided and that because their shed was actually glowing in the dark and that's not something from "The Simpsons", it's a fact. So what they did with that land and that was that they actually dragged -- part of it went down into the landfill site, the Scarborough Bluffs and that. As you can see here, that was built with that. They got that idea from Expo 67.

Part of it went into the Beare Landfill, that's why the elephants and some of the other animals are dying, and also part of it actually even went over into the Pickering Power Plant because it's made from reclaimed land and that, and that is also sitting on top of an earthquake zone and that, and it's unstable land in that, so...

And actually you can even see the City planning on here. I have taken a ruler because we do have engineers in our background as well, and this is just a straight-edged ruler and that and you can measure exactly 10 km over on the left-hand side, over in the corner over there, and that's the Ivanenko land over there, sorry.

And then the first thing that they

built on the property 20 years later was Centenary Hospital and that, to do damage control, and they put affordable housing on there because the Crown, they always build affordable housing and that on brown fields.

They have a policy, an actual policy to do that because low income people, they can blame it on their lifestyle habits and that, poor diets, smoking, drinking and that, so it's always them, it's never the Crown's fault for people dying of cancer.

You can see the Beare Landfill up there, you can see the Toronto Zoo. Do you remember PAWS Sanctuary, even said themselves they thought there was something toxic at the Zoo. Patrick actually announced that to the media.

I actually even contacted Bob Barker myself to look into that and have the elephants tested a year before because I told him that's why they were stalling, and you can also see they built U of T there, and that was all at the same time, and actually that is exactly 10 km over the reclaimed land where they put Pickering Nuclear Power Plant.

Then we have the F.J. Horgan Water Treatment Plant there and that, of course then we also have the waste -- the solid waste management down

there, and then we have Rohm and Haas with a pesticides plant right next door.

That's one of the reasons that I would not even drink this water, because the Pickering Nuclear Power Plant and that uses three times the amount of water and that, that all of Toronto uses per year, dumps it back into Lake Ontario, but it is no longer H₂O, its HTO and that, because it has picked up an extra hydrogen molecule, it's now tritiated water and that, which causes cancer and that.

When you were talking about 15 years ago somebody being out in the area of the plant out there, that was Sister Bertell. She actually was a dual citizen, Catholic nun and that who died last year from cancer and she actually went out to your plant when she retired and that, and she was trying to bring awareness and that because she's done numerous studies, she worked with Health Canada, the Atomic Energy down in the States, et cetera, and that.

So that's your limit of your exposure on that neighbourhood.

Now here, this is our healthcare and that. Well, sorry, these are the emergency centres and that, that you can see go over to Morningside Avenue. My daughter's father was actually born and raised in

that area. My daughter was born with birth defects. My second cousin and that, who actually after the 1974 loss of coolant episode at the Pickering Power Plant, which actually brought in building code in 1975, she was a poster child and that, Katrina O'Neill(ph) and that, for Sick Kids Hospital, she died at the age of seven of leukaemia.

AUDIENCE MEMBER: Shame!

MS GAWTREY: Yes, and that --

THE PRESIDENT: Oh!

AUDIENCE MEMBER: Criminal!

MS GAWTREY: Here is the Ivanenko -- the Malvern Remedial Law case and that, that you can read about and that. But on here actually, the only reason that a settlement was even done here and that, the one big victory that we've had in environmental law, and that is because the Heighintons and that were in academia that the Crown could not argue with and that, and one of them, his daughter actually was a dental assistant and that, and she died of radiation exposure, both from living on McClure Crescent and that because it wasn't revealed to them, as well as working in the trade.

Now, maybe she wouldn't have picked being a dental assistant if she had had proper

disclosure. So that's how the Heighintons won their case and that still is there today.

This is the REMP Report, the Radiological Environmental Monitoring Report and that for Darlington. You can see that they are doing a proper 10 kilometre radius, not that 10 kilometres is proper to begin with, that's a minimum and that, because if you look at what happened in Fukushima --

THE PRESIDENT: Okay. Can you focus at the end.

MS GAWTREY: Yes, okay.

THE PRESIDENT: We are not on Darlington and Pickering, please.

MS GAWTREY: No, no, I'm bringing it back in and that, because right here you can see they're doing mostly rural area and that, 10 km, however -- and you can see here, these are the categories and that that they're monitoring and that, and they actually include Oshawa residents and they actually name it, Oshawa -- I'm sorry, I don't have my glasses on here, but they're showing that.

Now here when we get to OPG and that Pickering Power Plant, they are only doing 5 km. That's just right up and that to the boundary line, the 3.2 km boundary line and that. And when I brought this

up with OPG they said it was an accident, however it went through prior, REMP Reports, it's on all of them, so it's been replicated year after year and that, because there is no disclosure and that in the West End.

Now here, and the reason that I am here, and that is because when we are talking about an incidence of 1:20,000 people, or whatever it is, and that three out of four people in my immediate family have cancer from living 10 km away and that, directly on the Bluffs, and the reason for that is because when the radiological effluents and that from GE-Hitachi's, you know, rods and that are released into the air, they are not taking into account the Scarborough Bluffs, which is a massive geological feature 300 feet high that's world renowned and that actually acts as a chimney and draws it back in and any engineer would know that fact.

So all of the people living along the Bluffs, right down to Fallingbrook in The Beaches and that are actually being hit at ground level with the effluents and that, and every single family along there, across all socioeconomic demographics and that are being hit with cancer, heart attacks, strokes, you know, learning disabilities and that, thyroid disease

and that, every single family and that.

Now, and this is a bad section -- this is a huge legal liability for you because this sector is also very WASP, white Anglo-Saxon Protestant, people who have lived in Toronto for over 100 years, who have held onto their homes and pass them down generation after generation.

You haven't been able to displace that population with the other poor people that have been piled for the past 30 years and that into Scarborough because you can't move the reactors, so you remove the population instead.

Back in the 70s when the loss of coolant episode happened at Pickering Nuclear Power Plant, all of a sudden --

THE PRESIDENT: Okay, enough, please.

MS GAWTREY: No. Well, I guess --

UNIDENTIFIED SPEAKERS: (Off microphone)

MS GAWTREY: I know, but I guess I'm --

THE PRESIDENT: Finally please in there, okay.

MS GAWTREY: I just mentioned -- but I guess, I know I'm --

THE PRESIDENT: We are not talking about Pickering or anything like this.

MS GAWTREY: Actually, but --

AUDIENCE MEMBER: You are not following her.

THE PRESIDENT: You just --

MS GAWTREY: No, no. Pickering wouldn't exist without --

THE PRESIDENT: You are way --

MS GAWTREY: -- GE-Hitachi's uranium rods.

THE PRESIDENT: You are way above your time. You are way above your time.

MS GAWTREY: Your uranium rods -- okay. Let me finish. Your uranium rods are sitting there and that, stack since the beginning when the plant came online in 1971, they are still sitting there. All the rods that GE-Hitachi has made and that at Lansdowne and Peterborough, they are all sitting on-site and that and they are just decaying and that, waiting for some place up north and that to be found and that, and nobody up north and that, you can't pay them any amount of money. Nobody wants this waste and that.

And this is why I'm stating you need

to start doing, you know, some actual proper research with the actual groups that are involved and that, because in the one that I went back here and that, if you look onto the -- you know, the critical groups that you're monitoring and now this is the fourth largest city in North America, you don't have Pickering on here, you don't mention Toronto, you don't mention, you know, Ajax, Whitby, you know, anybody on here.

So who are the urban residents being monitored and that? You've got a correctional institution and that. Who cares about a correctional institution when you've got the fourth-largest city and that in North America and that, so...

THE PRESIDENT: Okay, thank you.

Thank you very much.

AUDIENCE MEMBER: Whoo!

--- Applause / Applaudissements

MS GAWTREY: Well wait. No, no, one last thing and that. I just want to go to this. This is a friend of mine and that on Twitter who actually posted this and that from May 12, 2013 and that and he says:

"Pickering Nuclear Power Plant
as viewed from Bluffer's Park
today, this afternoon. I'm not

kidding." (As read)

THE PRESIDENT: Thank you.

MS GAWTREY: Well, no wait. When I asked the Canadian Nuclear Safety Commission what this was a photograph of, I was advised it was a controlled effluent release and that. That is not a controlled release, it's exploding in all four directions.

There was a frost advisory that day and I believe a pipe broke and we have seen numerous fires coming from that area and something needs to be done. You need to move your production out of this area. It's passé technology, it's killing people, you know that and I don't see how any of you can sit up there and feel proud about yourselves.

AUDIENCE MEMBER: How dare you!

THE PRESIDENT: Okay. Thank you.

MS GAWTREY: And I think you -- yeah, but you rehearse these things, you change the stats and that. I've worked for the Crown and that for 10 years --

THE PRESIDENT: Okay. Thank you very much.

MS GAWTREY: Yes.

AUDIENCE MEMBER: How can you represent --

AUDIENCE MEMBER: Explain this photo.
Explain it.

THE PRESIDENT: Does anybody have any
particular questions?

AUDIENCE MEMBER: All of you, how can
you represent --

THE PRESIDENT: Okay. We
would --just go ahead.

MR. RUITER: Don't just ask us stupid
questions (off microphone), ask a question directly.
Don't just seize on the weakest part --

THE PRESIDENT: Can you stay out of
this.

MR. RUITER: Could you explain that?
Ask a sincere question --

THE PRESIDENT: Can you stay -- go
ahead, ask the question, please.

AUDIENCE MEMBER: -- or a sincere
dialogue.

MEMBER McEWAN: So in slides 4 and
21 -- so start with slide 21, which is the picture
of --

MS GAWTREY: Oh, okay, hold on.

MEMBER McEWAN: Yes. So you have
written on that --

MS GAWTREY: This one, okay.

MEMBER McEWAN: Yes. There is a high incidence of cancer, thyroid disease and stroke running along the entire length of the Scarborough Bluffs.

MS GAWTREY: Correct.

MEMBER McEWAN: I have to ask this question: Is that anecdotal evidence --

MS GAWTREY: No.

MEMBER McEWAN: -- or is it --

MS GAWTREY: No, that's --

MEMBER McEWAN: -- epidemiological evidence?

MS GAWTREY: No. No, it's -- well, no, it's from both. As I said, I started the running the Tenants Association in 2002 when I noticed that there was a huge spike in cancer and heart disease in our buildings, a population of 225 family units.

I started to interview neighbours in behind us, in the mansions and this is also from our experience of living down Guildwood and knowing a number of families because my mother was very well known at the Guild Inn. So this is from a wild field and that between Guildwood and Scarborough Village. Those are the two populations here I have looked at.

MEMBER McEWAN: So have you taken

your anecdotal experience to --

MS GAWTREY: Yes, that's one of the reasons I'm with the Scarborough Village Neighbourhood Action Partnership that's being run by Rosemary Bell with the City of Toronto.

MEMBER McEWAN: Let me finish my question.

AUDIENCE MEMBER: It's now (off microphone).

MEMBER McEWAN: So have you taken the anecdotal evidence that you have to --

MS GAWTREY: OPG?

MEMBER McEWAN: -- a public health -- no, to Cancer Care Ontario --

MS GAWTREY: Yes, to Cancer Care but cancer is not a reportable disease, not in Ontario. This is one of the reasons and that that we don't have a proper --

MEMBER McEWAN: No, but cancer must be. It must be a reportable disease.

MS GAWTREY: Really, and that? Well, I have Stage IV ovarian cancer that I was diagnosed with. It was caught at Stage I in 2002.

MEMBER McEWAN: Would you please let me get a word in edgewise?

MS GAWTREY: Well, I'm still waiting for cancer staging and treatment.

MEMBER McEWAN: So there are two quite separate questions.

MS GAWTREY: No, not really.

MEMBER McEWAN: There is a cancer registry in Ontario.

MS GAWTREY: Yes.

MEMBER McEWAN: Which requires every case of cancer to be registered with the registry.

MS GAWTREY: That's reported, every reported case.

MEMBER McEWAN: So that is very --

MS GAWTREY: Physicians are corporations. They don't have to report this. It's not -- it's not mandated by Toronto Public Health or Public Health of Ontario.

MEMBER McEWAN: Can I make a suggestion?

MS GAWTREY: Yes.

MEMBER McEWAN: Can I make a suggestion? If you really believe you have good data to support your claim, your statement that there is a high incidence of cancer running along this bluff, then go to Cancer Care Ontario and say, "I believe that

there is an issue. Will you please investigate it for me?"

MS GAWTREY: I actually -- I actually -- just a minute.

AUDIENCE MEMBERS: (Off microphone)

MS GAWTREY: Just a minute. Just wait, wait, no, no.

Actually, excuse me, and thank you, Zach, and that. Thank you for support.

Actually, I have brought this to the attention of everybody and that. A civil engineer would know that what I'm stating is actually a fact and that.

No, no, with -- you're talking about -- we are 300 feet above the effluents. They cannot possibly go out and that. Like right here it's marked out here. It's showing it going out and that towards the lake. It can't possibly do that and that because the bluff's service chimneys bring the effluents back. You can see that by the flight patterns --

MEMBER McEWAN: But a question is the investigation of what you're claiming is a cancer cluster in this area. That's the first element and you obviously have good data. You're obviously very

passionate.

Try taking a formal approach through Cancer Care Ontario.

MS GAWTREY: I actually have and this is what I'm trying to state. When I have brought other sick building syndromes even in our own buildings, for example, if I send out -- you know get a civil engineer, an environmental engineer and we send out samples and that and we're getting back *Stachybotrys botra*, *penicillium* and *chlosporina*(ph) molds and then we have Public Health out. They get back soot and dirt and that.

There is a big disparity and that, particularly when, you know, Crown liabilities are involved.

MEMBER McEWAN: I've made my suggestion because I think you have provided us with some evidence that there is -- that you believe there is a cancer cluster.

MS GAWTREY: Well, actually I have more than that. I have my Princess Margaret, you know, which is now the cancer center of, you know, Canada and that. Or it's called the Princess Margaret Centre because as far as I'm concerned the GTA is the epicenter of cancer and that because of all of the, you

know, power plants and the nuclear activities running through our populace areas and that which even, you know, Russia wouldn't do and that with their nuclear industry, and that.

So you know the bottom line is that I have my records here from Princess Margaret proving I've been bounced out twice --

THE PRESIDENT: Okay, listen, thank you very much for your intervention.

MS GAWTREY: -- for my personalized healthcare.

THE PRESIDENT: We've got to move on. Thank you for your intervention.

AUDIENCE MEMBER: (Off microphone)

THE PRESIDENT: Go ahead.

MR. LEBLANC: So the next presentation is by Mr. D'Amico.

AUDIENCE MEMBERS: (Off microphone)
the photo.

THE PRESIDENT: We know. We're going to take the photo in their submission.

AUDIENCE MEMBERS: (Off microphone)
Explain the photo. Explain the photo. Explain the photo.

MR. LEBLANC: So the next

presentation is from Mr. D'Amico. I understand Mr. D'Amico is not here so we're going to treat his submission as a written submission.

THE PRESIDENT: Okay.

MR. LEBLANC: And we'll proceed then to the next submission.

THE PRESIDENT: The next presentation -- the next submission is an oral presentation by Ms Kirstin Scansen, as outlined in CMD 13-M51.81.

Ms Scansen, the floor is yours.

13-M51-82

Oral presentation by Kirstin Scansen

--- Native language spoken / langue autochtone parlée

MS SCANSEN: My name is Kirstin Scansen.

I'm a Nehithaw woman and a graduate student from the Indigenous Governance program. I come from and currently reside in Northern Saskatchewan. We've met once before when you came to my home in La Ronge. I believe I've spoken with all of you.

I didn't meet you. What's your name?

THE PRESIDENT: Can you make the

presentation, please?

MS SCANSEN: I'd like to speak with the women.

THE PRESIDENT: You can read it.

MS SCANSEN: That's the tradition. We speak with the women.

AUDIENCE MEMBER: (Off microphone) can't read it from here.

THE PRESIDENT: Can you proceed, please?

MS SCANSEN: I must be honest with you while I try to practice forgiveness and compassion, I've seen your behavior towards the Haudenosaunee people, particularly women this morning, and I'm furious that you were once present on my territory. I'm furious that your feet have walked on the same sacred ground as my ancestors.

--- Applause / Applaudissements

MS SCANSEN: The Key Lake Mine site, the location of the latest toxic mine effluent spill is part of our territory, the Woods Cree Nation. I stand with my Dene relations on whose territories the other mines are situated and who live downstream from the uranium mines, mills and tailings in northern Saskatchewan.

I am furious that you disrespect indigenous peoples across the region that you call Canada.

I am a member of the Committee for Future Generations, a group of indigenous men and women who, with our settler allies, stand and fight the Canadian uranium industry at its source in northern Saskatchewan.

I also stand in solidarity with the people of Toronto who have shown to the Commission today and yesterday a nearly unanimous rejection of the continued operation of the GE-Hitachi plant at 1025 Lansdowne Avenue.

Finally, I stand in solidarity with the Haudenosaunee peoples on whose stolen territories these meetings are currently taking place.

--- Applause / Applaudissements

MR. CALFCHILD: That's right!

THE PRESIDENT: Would you please stop the video? Can you please, officer, please?

MS SCANSEN: I have no problem with him continuing the video.

THE PRESIDENT: I have a problem with it.

MS SCANSEN: I have no problem with

it. The people with this territory have no problem with him being there.

THE PRESIDENT: Get --

MR. CALFCHILD: You have no authority here.

THE PRESIDENT: Take away his --

MR. CALFCHILD: Mr. Binder, you have no authority here to make any suggestions of removal of pieces on our lands.

THE PRESIDENT: Excuse me. In the hotel here you invited me. You should just treat us with --

MR. CALFCHILD: We are the rightful owners of our lands.

THE PRESIDENT: And we would like you to be orderly.

Go ahead, please.

MS SCANSEN: I would say the same thing to you, Binder.

MR. CALFCHILD: Yeah, you don't give orders to our people. You're a guest on our territory and you better remember that, my friend, because under the great law of peace we have the authority to remove you from our territory. You are on our land. You are a guest of Iroquois territory!

--- Applause / Applaudissements

MS SCANSEN: I have been sitting here for two bloody days, to quote you, Mr. Binder, when expressing your resentment about time spent on James Bay Cree Territory as part of the Matoush hearings. I have been sitting here for two bloody days listening to the propoganda spewed by the Canadian Nuclear Safety Commission about the safety of their operations.

As such, I have compiled a list of lies I've heard at this meeting and will address them each with true and incorporate some historical facts that prove the CNSC is complicit in the very nearly permanent pollution of indigenou bodies and lands as well as the lands of your own settler brothers and sisters where they now call home, including the City of Toronto.

One of the intervenors yesterday asked this Commission pointblank whether or not the uranium processed into fuel at the GE Toronto facility was sold for reprocessing into weapons, grey plutonium and enriched uranium for the creation of nuclear weapons. The Commission answered that Canada was a signatory to a nuclear non-proliferation treaty. That was really cute.

While that may be true while Canada

may have claimed its commitment to a nuclear weapons-free world, we know very well that India began its nuclear warhead program after receiving a gift of Canadian technology in the 1970s.

--- Applause / Applaudissements

MS SCANSEN: The Canadian Nuclear Safety Commission knows that when it encourages the proliferation of nuclear power systems through the sale of uranium fuel this so-called natural uranium produced through General Electric's Hitachi facilities is also encouraging the production of enriched uranium and plutonium for the creation of nuclear warheads worldwide.

And for the record, the Denesuline men who carried sacks of your beloved natural uranium at the World's first uranium mine in Port Radium, Northwest Territories died horrible, painful deaths by cancer and bone necrosis, a condition where bone tissue dies and bones collapse.

So General Electric, don't give us your bullshit about the safety of natural uranium when our Dene brothers and their widows know firsthand exactly what it's deadly properties are. You can't lie to us.

I would like to address the issue of

depleted uranium and the complicity of the Canadian Nuclear Safety Commission and the creation and use of depleted uranium weaponry in Iraq and Afghanistan.

Depleted uranium was found to be a weapon of mass destruction at the United Nations in 2002 and such weaponry can be directly connected with the GE Hitachi uranium processing facility in Toronto.

Leukemia and birth defects destroy families in civilian populations on which they are used. Indeed, the Gulf War syndrome in American soldiers has now been directly connected with the uranium that was processed in Canada and sold to the United States.

Now, when the Commission addresses and discusses this issue with me afterwards, I will not accept, "We do not have any control over what happens with the product once it leaves our hands" as an excuse.

AUDIENCE MEMBER: Right.

MS SCANSEN: You wouldn't hear social workers speak with such lack of responsibility and foresight when they place a child with a family, would you?

Don't try to convince the Canadian population that its nuclear industry is not implicated

in the creation of weapons of mass destruction when on December 5th, 2012 Canada abstained from voting on a United Nations resolution on the use of armaments and ammunitions containing depleted uranium.

The United States who purchases uranium processed in GE-Hitachi's facility first depleted uranium content in use in wartime was one of three nations who voted against the resolution. So I'm asking the Commission: Can you offer me a reasonable explanation as to why the Canadian state would refuse to sign against depleted uranium weaponry unless countries or -- sorry -- unless companies like General Electric were profiting off of its use?

A little word about nuclear waste and the difficulties associated with the creation of a deep geological repository:

While officials from General Electric deny that they play a role in the creation of nuclear waste, I'd like to point out that this is absurd. The GE-Hitachi uranium processing facility in the City of Toronto processes 53 percent of Canada's uranium pellets for use in nuclear power plants in Canada and is thus responsible for 53 percent of the waste at that particular stage in the chain.

That said, while I realize that the

Commission probably -- sorry -- publicly washes its hands of any involvement with the nuclear waste management organization, I think it's important to make connections between the difficulties in finding solutions for the nuclear waste problem and the calls since the 1970s for a moratorium on the nuclear industry in Canada.

Just a quick background: Spent nuclear fuel is millions of times more radioactive than uranium or the fuel generates its own heat spontaneously for millions of years and must be cooled for hundreds and thousands of years. Deep geological repositories are being considered because the idea is that the granite formations have the ability to absorb the heat generated by the waste

It is estimated that surrounding rock will be heated by the waste for 50,000 years. This is known as a thermal pulse and we have no way of knowing that the surrounding rock will not crack and expose ecosystems to uncontainable extremely deadly radioactivity.

I am against the continued operation of the uranium processing facility in the City of Toronto because it is a key cog in the machine that creates low, medium and high level nuclear waste that

humanity has absolutely no clue what to do with, but is currently seeking to situate on indigenous territory in either Ontario or about 300 kilometres away from my home in northern Saskatchewan.

AUDIENCE MEMBERS: Shame!

MS SCANSEN: I have been told by CNSC staff that when I present here in Toronto I am to speak only on the GE-Hitachi plant and not anything to do with my home territory in Saskatchewan. However, I will now turn my attention to the Key Lake spill of December 2nd, 2013.

If it weren't for my attendance here in Toronto some 3,300 kilometers from my home community I would have not ever heard of this spill. I am on a CNSC email list serve and I did not receive an email on this, though I have read the reports since. It's about four sentences long. I cannot figure out what the chemical properties are of treated reverse osmosis permeate water or whether or not its radioactive, what kind of metals are in it.

I know that what Cameco and the CNSC refer to in that accident report as a "receiving environment" is in fact Dene territory and the bodies of Dene men, women and children.

As has been stated here, Commission,

previously your ancestors signed treaties with my ancestors, the basic tenets of which are that we would accept you as family and you would have the great privilege of residing on our territories with us as our relations; cousins. In exchange, you agreed not to damage or exploit the land.

Undermining the integrity of other living things is a right that no group of humans can possess because, as I have learned, it is not a right the Creator gave to us or anyone. So we could not give it to you. It was this teaching that enabled my people to survive in partnership with the land, water and animals for tens of thousands of years. And it is because you lack these teachings that you continue to put your own families, communities, stakeholders and the nation at great risk.

Over the course of this meeting I have heard Toronto residents express to you passionately that the GE-Hitachi Uranium Processing Facility should not be located so closely to a residential region in Toronto.

Myself as well as the Committee for Future Generations and other concerned citizens in Saskatchewan stand in solidarity with the people of Toronto.

--- Applause / Applaudissements

MS SCANSEN: We agree that a uranium processing facility should not be located in the City of Toronto because it should not be located anywhere at all.

AUDIENCE MEMBERS: Yeah!

MS SCANSEN: The nuclear industry does not belong in Canada, nor does it belong anywhere in the world.

AUDIENCE MEMBERS: Right. That's right.

MS SCANSEN: So to summarize, I have three questions for the Commission to answer.

One, can someone from the CNSC staff tell me what if any heavy metals were released into Denesuline territory on December 2nd and whether or not they are radioactive?

And in case you tell me, Binder, in advance -- in case you tell me that this is not an appropriate subject for this hearing, I spoke with a senior communications advisor through email today and she actually said that she encouraged me to ask these questions and that the appropriate CNSC staff would be available to answer are actually here in the room today. So I'm in a perfect place.

And I can show you the email.

The second question is the last time we spoke I asked you to expand your Commission membership to include an expert on renewable resources.

My question is why hasn't this been done?

My third question is does the Canadian Nuclear Safety Commission deny its involvement in the sale and export of uranium for enrichment in the United States for the creation of weapons of mass destruction in the form of depleted uranium weaponry?

Thank you.

--- Applause / Applaudissements

THE PRESIDENT: Dr. McDill.

MEMBER McDILL: Thank you. I'll ask for some more information on the December 2nd event if there is indeed someone who is able to answer that.

MS SCANSEN: I have some specific questions. I wrote them in an email to -- I believe her name was Isabel -- and I have them right here if you have a moment.

The questions are, for the record: What is reverse osmosis permeate water?

The second one is: What is the permeate water contaminated with?

The third: What are the radioactive particles in the waste that was released on December 2nd?

The fourth: What are the heavy metals in the permeate water?

And this also has been on my mind: Does the CNSC's acceptable range take into account the accumulation of spills such as this over time?

Also, what are the human and animal health hazards of the metals and other radioactive components in the water?

THE PRESIDENT: Okay. Are you at the actual -- ability now to reply to those questions?

MR. ELDER: Peter Elder, for the record.

I don't know that I have all the specific answers in terms of what --

THE PRESIDENT: Do a quick one, please.

MR. ELDER: Okay. So when you went back in is what if this is -- and we said yesterday this is the water after. It's a treatment stage. Reverse osmosis is a process to remove contaminants.

After the contaminants are removed the final step in the process is to balance the SSD,

slightly acidic water. So they have to balance the SSD so it's a neutral normal water.

In this case there was -- for reasons that we are still looking into there was overbalance and it became what we call caustic water. In terms of their susceptible PH range the release was outside that normal PH range.

So it was not in terms of that it wasn't treated water. It was treated. There was error in how the PH was adjusted in the end.

MS SCANSEN: Sir, I don't understand what caustic means, sorry, if you can --

MR. ELDER: Well, again, do you know what --

AUDIENCE MEMBER: Try.

MR. ELDER: Well, can I try then? I'm trying to -- acidic -- in a PH you can have something that is acidic. The opposite would be something that is not acidic. It would be alkaline.

AUDIENCE MEMBER: Basic!

MR. ELDER: I'm trying to make it basic, sorry.

It is alkaline. So this was alkaline water rather than what is supposed to be neutral water.

MS SCANSEN: How are the communities

informed about this?

THE PRESIDENT: Okay. We are not going to go into a Key Lake discussion right now. Your question will be replied. If you send the five questions to staff you'll get a reply.

MS SCANSEN: I already sent it and I already get a message saying I should and I am encouraged to ask these questions during my presentation to the Commission this afternoon.

THE PRESIDENT: Dr. McDill.

MS SCANSEN: This afternoon your staff told me that I should ask it right here.

MEMBER McDILL: May I suggest that those questions go a little off line because when we're talking about something like reverse osmosis, if the first step is the explanation of reverse osmosis that's going to take a few minutes. And then the next step is the difference between acidic and non-acidic.

MS SCANSEN: Yeah. No, I can understand that but --

AUDIENCE MEMBER: She did ask the question what is reverse osmosis, so I'm not --

MS SCANSEN: So the report says that there is 200 cubic metres of treated reverse osmosis permeate water and that the release of that into the

environment constitutes a spill which is also going to need to be reported on. So why is this a problem? I was just trying to understand why that is a problem. I don't know permeate water is and why if something is treated it still constitutes a spill when it's released to the environment.

MEMBER McDILL: This is why I'm suggesting that it might be more easily carried out one on one. I'm volunteering staff here without --

AUDIENCE MEMBER: (Off microphone)

MEMBER McDILL: I'm sure, and I agree that that's the case but --

THE PRESIDENT: Was it a reportable event? Yes. Would it be then posted?

MR. ELDER: It is already posted on Cameco's website and we have already replied yesterday that we will come back to the Commission with further details on it.

THE PRESIDENT: Okay, thank you. That's all we want to discuss on it right now.

MS SCANSEN: I'm particularly interested in asking the question about accumulative radiation. I know that there is acceptable -- I know that there is acceptable levels on every individual spill but I haven't heard from, you know, the

Commission on whether or not there is any regulations on accumulated radioactivity since it remains radioactive for tens of thousands to millions of years.

So what we're talking about is the general increase in radioactive particles into the -- sorry -- released into Dene territory over years and years and years and years.

DR. THOMPSON: Patsy Thompson, for the record.

So the answer is, yes, we do have programs that take into consideration accumulation over time. Every mine site has to have an environmental effects monitoring program, so a program that looks at effects other than the environment. That is the program that looks at longtime accumulation.

The programs have been run at all the mine sites for, you know, a few decades. In some cases there has been impacts from mining discharges very close to the point of release and further downstream the impacts are not visible in aquatic systems from atmospheric releases, from radon and other radionuclides and contaminants. The impacts are very localized and have not affected regions.

We have done detailed risk assessments and there is no evidence of any

accumulation of radionuclides in the environmental pathways and in food that people eat around the mine sites.

MS SCANSEN: Lies. Lies. Those are lies. A report came up from the Sierra Club of Canada that says berries are contaminated with uranium as are blueberries, as are lichen which are eaten by caribou which travel all over the territory and which are eaten by my family.

THE PRESIDENT: I guess you don't want an answer. You just want to make somebody else answer. You just got an answer from the CNSC. You asked a question --

MS SCANSEN: Okay. Well, then I have another answer for you.

MR. CALFCHILD: She lies like --

MS SCANSEN: Then I have another answer for you. Radon gas is released from the tailings.

THE PRESIDENT: I want to --

MS SCANSEN: After 3.825 days which is the half-life of radon it turns into polonium. Polonium was used to poison the Russian spy and it is deadly in minute quantities. It's accumulating all over the territory.

But, okay, I understand. We've had enough discussion on the Key Lake situation. Let's move on to depleted uranium.

My question was --

THE PRESIDENT: I heard your question. Let me answer.

MS SCANSEN: Go ahead.

THE PRESIDENT: There is not ever in Canada right now an ability to send uranium for any weapon construction.

Let me say it one more time: No uranium from Canada will be used for anything but peaceful application, okay?

Don't believe what --

MS SCANSEN: Can you explain why Canada wouldn't sign on to an anti --

THE PRESIDENT: You have to ask the Government of Canada. We are not -- we are --

MS SCANSEN: I'm just wondering --

THE PRESIDENT: We are the Commission --

MS SCANSEN: Were you appointed by the Prime Minister?

THE PRESIDENT: We are a safety commission. We do not sign foreign affairs agreements.

MR. RUITER: (Off microphone) Yes, you do. You signed --

THE PRESIDENT: No, we don't --

MS SCANSEN: Weren't you just in Kazakhstan signing something?

THE PRESIDENT: We signed a petition --

MS SCANSEN: You can tell me about that if you like.

THE PRESIDENT: Okay, I guess you guys don't want to read and don't want to listen. The Nuclear Corporation --

MS SCANSEN: I read your email.

THE PRESIDENT: -- Agreement was signed by Ministers of Foreign Affairs. The administrative arrangement is where the assurance that we gave with the regulator on the other side that no uranium materials from Canada will ever be used for anything else but peaceful applications.

Okay.

MS SCANSEN: That's the same thing you said in the 1970s.

THE PRESIDENT: Thank you for your intervention. We are going to break now for 10 minutes coffee break.

Thank you.

--- Upon recessing at 3:50 p.m. /

Suspension à 15 h 50

--- Upon resuming at 4:09 p.m. /

Reprise à 16 h 09

THE PRESIDENT: Okay. Could you people please vacate those seats?

AUDIENCE MEMBERS: Why? Why?

THE PRESIDENT: Because you are intimidating staff and other people. How is that? Can you please move back?

MS SCANSEN: They have guns and we have words and a feather.

THE PRESIDENT: We are finished with --

AUDIENCE MEMBERS: (Off microphone)

THE PRESIDENT: Listen. It's going to be very simple. You are either going to move back and respect the rules of procedure of the Commission or we will shut down the hearing now.

MR. CALFCHILD: We'll see you later because this is our land and our territory. We don't take orders from someone that is not of our government.

THE PRESIDENT: You invited us. You invited us.

MR. CALFCHILD: We didn't invite you on our territory, sir.

THE PRESIDENT: Think about Aboriginal hospitality for a change. So you invited us to come here and listen. We have listened to you.

We want to offer another two or three intervenors the opportunity to speak. Be courteous enough and move back. Allow the staff to come back. Allow GE's staff to come back and to be heard, and to allow us to do another round of questions.

AUDIENCE MEMBER: (Off microphone)
These women and these people are not moving.

MS SCANSEN: I think they need to make this --

THE PRESIDENT: This meeting now is over.

--- Whereupon the meeting concluded at 4:10 p.m. /

La réunion s'est terminée à 16 h 10