

1 we go towards the CMD process.

2 We have multiple accounts that do exist.
3 One of them is the info account where the -- any member of
4 the public will request information and we respond to it
5 as fast as humanly possible. As the process comes towards
6 a CMD as in this case before you, the Commission -- then
7 the Secretary is the point of contact that will provide
8 the answers.

9 So we go out when we are asked to go out,
10 we haven't turned anybody down. The secret meetings with
11 the Aboriginals, they were no secret. When we realized --
12 and I give -- [you know, I call the shots as is]. We
13 dropped the ball with respect to the Northern Lights
14 community for a request to come out. The issue was more
15 of a timing and resources. When the mayor highlighted to
16 myself that there has been no response, we immediately act
17 on it and we did go out to the Northern Lights.

18 **MEMBER BARRIAULT:** Thank you.

19 Can I ask Bruce Power to comment on this
20 for me?

21 **MR. HAWTHORNE:** Yeah, for the record,
22 Duncan Hawthorne.

23 Obviously, this is slightly a tangent to
24 the reason why we're here today, but since the lady has
25 taken the time to present, then it's reasonable to give

1 And, tragically, the oil spill in the St.
2 Lawrence River just last night is yet another reminder of
3 potential risks.

4 So what about the accidental risks with
5 this proposed steam generator shipment? The steam
6 generators lacking any transport container will bear the
7 full brunt of destructive forces resulting from any
8 accidents including a sinking.

9 The CNSC staff said yesterday that they
10 have full -- "they have confidence in the integrity of the
11 welds" sealing the steam generators. This is a false
12 confidence. The CNSC staff admitted yesterday it has not
13 analyzed the risk of a heavy load drop of a steam
14 generator during loading of the ship in Owen Sound,
15 although they assumed that no breach would occur despite
16 damage to a steam generator.

17 What if 15 steam generators had already
18 been loaded and the 16th were dropped? This scenario was
19 brought up earlier. Could the dropped steam generator be
20 breached? Could the dropped generator also breach other
21 already installed steam generators below? Could not the
22 so-called fixed contamination in the inner tubes be
23 unfixed by damage by such destructive forces?

24 Crane failures are all too common in the
25 United States at nuclear installations. Just on the Great

1 Lakes the Big Rock Point and the Palisades and the Cook
2 Nuclear Power Plants in Michigan have all experienced
3 crane mishaps, including radioactive waste crane mishaps.

4 Mr. Jammal of the CNSC staff said yesterday
5 that these steam generators "are not soluble" in water,
6 and Mr. Hawthorne of Bruce Power said much the same thing
7 today.

8 But certain of the hazardous radioactive
9 substances contained within the steam generators are water
10 soluble. If the steam generators are breached, these
11 hazardous radioactive substances could leak out into the
12 Great Lakes.

13 Caesium-137, a muscle-seeking radioactive
14 isotope with a 300-year hazardous persistence, is water
15 soluble. Certain valence states of plutonium isotopes,
16 which are ultra-hazardous, are also soluble in water.
17 This was confirmed and revealed to the public by the U.S.
18 Department of Energy in the late 1990's.

19 And I wanted to bring up this issue of CMD
20 10-H19.C, which was just published two days ago, which
21 revealed that a 50 percent underestimate of the
22 radioactivity content had previously taken place because
23 plutonium-241 was not included. So this calls into
24 question the calculations that have been performed. It
25 calls into question the conclusions that have been

1 reached.

2 And I looked at the radioactivity content
3 of the Unit 2 Steam Generator and it turns out that the
4 plutonium-241 content amounts to 118,000 megabequerels.
5 If you add all the other 22 radionuclides together, their
6 radioactivity content is 185,000 megabequerels. So this
7 was a very significant underestimate that was just
8 revealed to us less than 48 hours ago.

9 I keep hearing from the CNSC staff that
10 only four grams of radioactive substances are contained in
11 each of these steam generators but, of course, the weight
12 of radioactive hazardous materials is a red herring. How
13 many fatal doses does four grams of certain of these
14 hazardous radioactive substances equate to? How many
15 hundreds of thousands of human lung cancers could a few
16 grams of plutonium isotopes cause?

17 Additionally, how can the CNSC staff have
18 confidence in the integrity of the welds sealing shut the
19 steam generators when they themselves admitted just
20 yesterday that the welded plates could fail. If I
21 understood what was said correctly, the welded plates
22 could fail due to pressure when submerged under 800 feet
23 of water, when there are certain locations on the shipment
24 route that are 800 feet deep. It sounds to me like
25 there's no safety margin whatsoever.

1 Mr. Hawthorne says that the shipment will
2 be made on the open lakes away from the near shore where
3 water drinking intakes -- drinking water intakes are
4 located. But would not this shipment commence in Owen
5 Sound where drinking water intake is located? Wouldn't it
6 pass through narrow passage ways, such as the St. Clair
7 River, the Detroit River, the Buffalo River, the St.
8 Lawrence River, which also have drinking water intakes
9 along their shores?

10 I just learned today from the Lake Ontario
11 Waterkeeper testimony that on the St. Clair River alone
12 there are 29 water intakes for local communities there.

13 A question about liability. I've heard
14 some discussion about the liability, but I wonder about
15 the complicating factor of the liability if an accident
16 were to occur in U.S. territorial waters. And I would
17 just like to point out that \$75 million of liability for
18 Bruce Power and its insurance companies is a relatively
19 small amount of money considering the damage that could
20 result.

21 Regarding emergency preparedness, or the
22 lack thereof, how would over 1,500 tonnes of radioactive
23 steam generators welded below decks to the ship be
24 recovered from the bottom of Owen Sound, for example, or
25 from the bottom of the open Great Lakes at much greater

1 depths, from the bottom of rivers near large population
2 concentrations. Will a companion ship with a mobile crane
3 capable of lifting such heavy weights and a team of
4 emergency responders accompany this shipment on its
5 journey? Mr. Hawthorne has said no immediate retrieval
6 would be undertaken in the even of a sinking, which I find
7 a very disturbing statement.

8 A radioactive waste accident on the Great
9 Lakes could harm human health. It could harm the
10 environment, as well as the economy. It has been
11 confirmed in the United States that once a radioactive
12 waste transport route is designated that property values
13 along that route are harmed even before the shipments
14 begin. And due to what's called the radioactive waste --
15 the radioactive stigma effect, a nuclear waste accident on
16 the Great Lakes could lead to a spontaneous public boycott
17 of such products and services as drinking water supplies,
18 tourism, recreation, fisheries, and agricultural sectors
19 that utilize Great Lakes water for irrigation, such as
20 fruit, orchards, livestock operations and grain.

21 The economic damage could result from an
22 accident that did not even release radioactivity into the
23 Great Lakes due to the stigma effect, but of course a
24 release would make such harm significantly worse including
25 the risk to human health and ecosystem harm.

1 This shipment of 16 steam generators would
2 set a bad precedent, as has been said. There are 48
3 additional steam generators at the Bruce site and what
4 might come next; high level radioactive waste shipments on
5 the Great Lakes as a possibility? Those would risk
6 nuclear -- inadvertent nuclear chain reactions on the
7 bottom of the Great Lakes ---

8 **THE CHAIRMAN:** Could you please wind up?

9 **MR. KAMPS:** Sure.

10 I guess the final point I would like to
11 make is a question and that is in regards to the recycling
12 of radioactive metals into consumer products. It was
13 stated yesterday by a CNSC staff person that regulations
14 in Canada for the release into commerce, unrestricted
15 release, free use release, of certain radionuclides are
16 stronger than European Union regulations for those
17 isotopes -- the Swedish regulations. My question is, if
18 the origin of this radioactive waste is Canada, which
19 regulatory regime takes authority? Is it the Canadian
20 regulations that are stronger for certain radioisotopes or
21 is it the European regulations that are weaker?

22 If it is the weaker regulations, I find
23 this unacceptable. It would represent a paradigm shift of
24 Canada exporting hazardous radioactive materials to a
25 place in the world where environmental and safety and

1 health regulations are not as strong as they are here.

2 **THE CHAIRMAN:** Thank you. The floor is
3 open.

4 Mr. Graham?

5 **MEMBER GRAHAM:** I think that last question
6 had been answered earlier that material coming back into
7 Canada, I believe, has to meet Canadian standards and it's
8 not European. That was answered at least once, is that
9 correct, Mr. Jammal?

10 **MR. JAMMAL:** For the record, Ramzi Jammal.
11 You are correct, Mr. Graham.

12 **MEMBER GRAHAM:** Secondly, my question to
13 the intervenor is, the mandate of your organization, is it
14 really to see that there are no more nuclear facilities on
15 the Great Lakes?

16 **MR. KAMPS:** Yes. Our position is for the
17 prevention of the building of new reactors as well as the
18 shutdown of the existing reactors, that's right.

19 **MEMBER GRAHAM:** Roughly how many reactors
20 are there on the Great Lakes on the U.S. side?

21 **MR. KAMPS:** There are a large number.
22 Dozens.

23 **MEMBER GRAHAM:** And how -- do you intervene
24 every time there's a movement from any of these reactors
25 or how do you see them getting refuelled and so on?

1 I mean you're here in our country and I
2 appreciate your intervention because you had some good
3 questions but my concern is this is a very, to what we're
4 told, a very low level movement where there are many high
5 level radioactive movements perhaps in the U.S.

6 Do you intervene in all of those in the
7 same manner that you intervene in the -- and what type of
8 reception do you get?

9 **MR. KAMPS:** Yeah, we sure do, for a very
10 long time we have and a part of the context of our
11 intervention and our concern here is that there have been
12 proposals by the United States Federal Government, the
13 Department of Energy specifically, to transport high level
14 radioactive wastes on the Great Lakes under its Yucca
15 Mountain Plan and there have been many organizations
16 including environmental groups and public interest groups
17 that have generated a lot of resistance to those proposals
18 and it has moved certain United States senators, for
19 example, Senator Stabenow of Michigan, Senator Feingold of
20 Wisconsin, even Senator Durbin of Illinois who's the
21 Assistant Majority Leader of the U.S. Senate, to express
22 grave concerns about shipping such hazardous material on
23 the Great Lakes. I mentioned one risk of high level
24 radioactive waste shipments on the Great Lakes is during a
25 sinking, there's enough fissile Uranium-235 and Plutonium-

1 239 in the irradiated nuclear fuel that if the containers
2 are damaged and the fuel configures itself into a critical
3 mass, the water infiltrating the container could serve as
4 a neutron moderator and actually spark a nuclear reaction
5 on the bottom of the Great Lakes.

6 So those kind of concerns lead us to be
7 concerned about the precedent set by shipping radioactive
8 wastes like this proposal.

9 **MEMBER GRAHAM:** But the U.S. did not stop
10 those shipments and yet you're petitioning U.S. government
11 to stop this shipment which is low level.

12 I mean ---

13 **MR. KAMPS:** There have been no ---

14 **MEMBER GRAHAM:** What I find a little
15 difficult and I haven't -- I want to hear all of the
16 decisions and all of the presentations but when it's --
17 when you permit high level waste and the U.S. government
18 permits that to happen and yet you're still petitioning
19 them and hoping that they'll stop low level in another
20 country, granted we'll be going into U.S. waters, but
21 what's the rationale?

22 **MR. KAMPS:** There have been no high level
23 radioactive waste shipments on the Great Lakes performed
24 by the United States. That's a proposal. It's a proposal
25 that continues to rear its head. Any away-from reactor

1 proposal in the United States could involve such high
2 level radioactive waste barge shipments. These would be
3 barges.

4 The Yucca Mountain Plan, it's reactors that
5 lack direct rail access that would perhaps launch these
6 shipments because the containers like these are very heavy
7 in weight, they're over 100 tonnes, so to use rail-sized
8 containers would require either a heavy haul truck
9 shipment to the nearest railhead or a barge shipment on
10 the Great Lakes and the ports implicated under the Yucca
11 Mountain Plan were Milwaukee, Wisconsin and Muskegon,
12 Michigan.

13 And one of the scenarios that was just
14 mentioned by the previous intervenor that caused
15 tremendous concern was the terrorism potential and to
16 answer the question that was asked by the President, why
17 would this particular shipment be an attractive terrorist
18 target, what came out in the Yucca Mountain debate was
19 that because of the high profile of the shipments, that
20 alone causes concern.

21 Our expert witness in opposition to the
22 Yucca Mountain proposals was Dr. David Ballard of Santa
23 Barbara State University in California and he pointed out
24 that the high profile federal nature of the Yucca Mountain
25 shipments alone created a risk of a terrorist attack but

1 so did the contents, and in this particular case you've
2 got here a very high profile shipment.

3 **MEMBER GRAHAM:** These was a question with
4 regard to regulations coming out two days ago that was a
5 concern. Perhaps that should be addressed and as it's my
6 last comment.

7 **MR. JAMMAL:** Ramzi Jammal for the record.
8 Mr. Graham, it was in supplemental CMD
9 correction due to an administrative error but I will ask
10 Mr. Sylvain Faille to speak of it.

11 **MR. FAILLE:** Thank you. Sylvain Faille.

12 Just to clarify the content of CMD 10-19C,
13 it was to correct the appendices to the CMD where the
14 wrong appendices were attached to the CMD but the content,
15 the revised content, was provided in CMD 14B and that was
16 provided earlier. And I can assure everybody that all --
17 before making those changes, all of the evaluations were
18 verified to ensure that there was no change to any of the
19 conclusions and that all the numbers were still acceptable
20 in the earlier CMD before releasing the revised CMD with
21 the correct changes to the table of isotopes including
22 Plutonium-241.

23 **THE CHAIRMAN:** Thank you.

24 Just to follow on Mr. Graham, you did say
25 that there is no high level fuel going on the Great Lakes,

1 but is there low level fuel allowed on the Lakes from the
2 U.S. in between some of those nuclear plants?

3 **MR. KAMPS:** I am less familiar with that.
4 I do not know, to answer that question.

5 **THE CHAIRMAN:** Okay, thank you.

6 Now, let me ask you, when did you apply for
7 the U.S. transport to launch an environmental assessment
8 and, let's see, is that their normal process and what's
9 your experience? When will you get an answer whether that
10 will happen or not?

11 **MR. KAMPS:** No. The Department of
12 Transportation Pipeline and Hazardous Materials Safety
13 Administration is a relatively obscure agency that I have
14 never had dealings with before but it got national news
15 coverage because of the Kalamazoo River oil spill that
16 happened in early August and it is also -- it just so
17 happens to be the agency that would grant the permit for
18 this shipment from Bruce.

19 So we have not had dealings with this
20 agency before. The date on our petition was -- I don't
21 know the date exactly but it was a number of weeks ago,
22 maybe two weeks ago at this point, and the response time
23 from that agency, I could not say.

24 **THE CHAIRMAN:** To Bruce, what would happen
25 or is it likely to happen, I don't know the answer, that

1 they will actually follow-up on that?

2 **MR. HAWTHORNE:** Chairman, you've asked and
3 answered that question yourself. Unless all the permits
4 are in place this shipment will not occur.

5 You've asked and answered it. We know
6 there are a number of approvals necessary here. This is
7 one of a number that we have to obtain and without them
8 all the shipment won't occur. If it takes time then it
9 will delay our plans.

10 **THE CHAIRMAN:** Any other questions?

11 Thank you very much for your intervention.

12 I think it's a good time for us to break
13 for one hour, so let's say we reconvene at 10 to seven.

14 Thank you.

15

16 --- Upon recessing at 5:53 p.m./

17 L'audience est suspendue à 17h53

18 --- Upon resuming at 6:54 p.m./

19 L'audience est reprise à 18h54

20

21 **THE CHAIRMAN:** Okay, we are back in case
22 you were wondering.

23 We'll move now to the next oral
24 presentation from the Citizens for Alternatives to
25 Chemical Contamination as outlined in CMD 19.34 and

1 19.34A, and I understand that we have Ms. Kay Cumbow. I
2 don't know if I pronounce it correctly.

3 **MS. CUMBOW:** Yes.

4 **THE CHAIRMAN:** Who will join us through
5 teleconference.

6 Can you hear us?

7 **MS. CUMBOW:** Yes, I can. Can you hear me?

8 **THE CHAIRMAN:** Yes.

9 Please proceed.

10

11 **10-H19.34 / 10-H19.34A**

12 **Oral presentation by**

13 **Citizens of Alternatives to**

14 **Chemical Contamination**

15

16 **MS. CUMBOW:** My name is Kay Cumbow and I
17 represent Citizens for Alternatives to Chemical
18 Contamination which is a non-profit group in the State of
19 Michigan.

20 And I would like to thank you for this
21 opportunity which would not have come about had citizens
22 like myself and elected officials and environmental groups
23 not questioned this whole hastily conceived process.

24 And I would like to reiterate what others
25 have said, that there was insufficient time, inadequate

1 resources and information for the public to respond in an
2 informed way.

3 Shipping these radioactive steam generators
4 to Studsvik in Sweden for processing is a project for
5 which there was no environmental assessment done.
6 Contrast that with environmental assessment done in the
7 2005/2006 of the area around the Bruce nuclear complex,
8 including the Western Waste Management facility which has
9 been studied rather intensely and has been the subject of
10 many former environmental assessment studies.

11 To say that the environmental assessment in
12 2006 could possibly cover the Georgian Bay with its
13 treacherous reaches, a much longer portion -- a much
14 larger portion of Lake Huron, the St. Clair River, Lake
15 St. Clair, the Detroit River, Lake Erie, Lake Ontario, the
16 immense stretches of the St. Lawrence Seaway is
17 unfathomable.

18 The Governments of Canada, the U.S., First
19 Nations and indigenous nations all share use and
20 responsibility for the environmental protection of these
21 irreplaceable freshwaters, as detailed in the Great Lakes
22 Water Quality Agreement.

23 And just because current environmental
24 assessment law in Canada does not cover transport of
25 radioactive reactor waste on the Great Lakes, in the St.

1 Lawrence does not excuse ignoring the Great Lakes Water
2 Quality Agreement, nor should it.

3 The Canadian government and Bruce Power and
4 the CNSC who are enjoined to protect the health and
5 welfare of Canadian citizens at least are beholden to the
6 40 million citizens and their future generations who
7 depend utterly on the Great Lakes and St. Lawrence Seaway
8 for their drinking water, for a \$4 billion fishery, for
9 healthy children with healthy DNA, for water, with a
10 diverse, unique, and threatened aquatic life flora.

11 In 2005 over 200 scientists stated in a
12 report that many areas of the Great Lakes and St. Lawrence
13 Seaway were at or beyond the tipping point of
14 sustainability. Plankton, which is the base of the food
15 chain, is decimated throughout the Great Lakes.

16 If this shipment is allowed to go through
17 the Great Lakes will become a thoroughfare for radioactive
18 reactor waste. Now, before this occurs, is the time for
19 environmental scientists -- independent environmental
20 scientists, independent health physicists, radiation
21 experts to examine the risks, experts that are not tied to
22 the nuclear industry. And do this in a serious manner,
23 not with a 30-day comment period with scant access to
24 reports that are integral to making a comprehensive
25 environmental assessment, and including engineers, other

1 technical experts regarding possible accident scenarios in
2 these immense waterways.

3 Also, we're concerned that the
4 radioactivity -- that some of the radioactivity in these
5 steam generators will be free released into the global
6 metal supply which could reach both the U.S. and Canada.
7 And they are -- if they are alpha emitters or weak beta
8 emitters they will be very difficult to detect, or
9 impossible, and instead of lessening their environmental
10 footprint Bruce Power seems to be expanding it globally.

11 Many radionuclides that are in the steam
12 generators, bio-accumulate in the food chain and many of
13 them bio-concentrate, just like DDT.

14 Plutonium becomes at least a thousand times
15 more soluble to the human body when mixed with chlorine
16 which is practically everywhere in our watersheds.

17 You also have seemed to gloss over the
18 radioactive contents of these steam generators. The U.S.
19 DOE, the Department of Energy, in 2002 printed a report
20 stating that all -- that the old radioactive steam
21 generators from pressurized water reactors should be kept
22 beneath concrete, and even then they were concerned for
23 sky shine from the penetrating gamma radiation coming
24 through the concrete and bouncing off the atmosphere and
25 irradiating people on earth.

1 It's difficult to believe that the contents
2 of radioactive steam generators from the U.S. pressurized
3 water reactors and CANDUs are that far apart. Even
4 Studsvik states that the contents of the steam generators'
5 tubing are very radioactive.

6 So I have some questions, are not the
7 workers on the ship at risk; and if there was a collision
8 with a tanker or another ship could there not be an
9 explosion or fire; and if the generators were broken open
10 could there not be a very radioactive plume that might
11 keep firefighters or first responders from approaching the
12 ship in a timely manner?

13 If the ship hits rocks or the bottom in a
14 gale or a snowstorm or a fog and the ship's hold was
15 broken and the generator is broken open, could timely
16 retrieval occur in the deepest water of the Great Lakes?

17 Could the first responders or divers be
18 exposed to serious doses if the tubing was broken apart?
19 How deep is the deepest part of the Great Lakes and St.
20 Lawrence these will traverse and could internal pressures
21 from depths break open the generators?

22 Are there not places where currents make
23 retrieval difficult, if not expensive or impossible?

24 Our confidence in the protection of workers
25 by Bruce Power is shaken considering the contamination of

1 Bruce workers by alpha radiation last November and in June
2 when the Canadian Nuclear Safety Commission asked Bruce
3 Power to test all of their workers for alpha radiation,
4 they refused, due to cost and stating that it was
5 unnecessary.

6 So I also wonder why weren't detailed
7 reports of the Great Lakes accident scenarios that exist
8 released to the public.

9 And I guess with that I'll end and I just
10 -- I just really think that this -- these are
11 irreplaceable waters and I believe that this should be
12 subjected to a comprehensive environmental assessment and
13 that all of the nations involved and all throughout the
14 Grand Lakes and St. Lawrence Seaway, and that includes
15 First Nations and indigenous nations along the waterway
16 route. It should be that their environmental parts of
17 their government like the Ministry of Environment and the
18 EPA, et cetera, should all be involved in this.

19 And with that, I thank you.

20 **THE CHAIRMAN:** Thank you very much.

21 The floor is open. Monsieur Harvey?

22 **MEMBER HARVEY:** Merci, Monsieur le
23 Président.

24 In page 2 of the written submission, the
25 first dot, lack of meaningful process, there has been no

1 notification to nor consultation with the public along the
2 proposed land and water routes, et cetera, et cetera.

3 We heard this afternoon that the
4 information was provided to those being on the mailing
5 list. There could be a lot of people on that list which
6 are not at all concerned by the project, but outside that
7 list, the other people, how could they be informed of such
8 procedure, or was those -- were those people informed that
9 something was on the table here?

10 **MS. CUMBOW:** Is that a question to me?

11 **MEMBER HARVEY:** No, no, no. I'm addressing
12 the question to the staff here.

13 **MR. JAMMAL:** For the record, it's Ramzi
14 Jammal.

15 You're correct, Monsieur Harvey, by stating
16 that we do have a mail-out for the stakeholders who are on
17 our mailing list that we inform them of the hearing. We
18 inform them of the information. And I'll ask support from
19 the Secretariat with respect to the process of publishing
20 that there is a hearing to include what is the issue and
21 the matter; by publishing it in multi types of
22 publications from the emails aspect, the push-out mailing.

23 I believe we take -- and in newspapers. We
24 put ads in the newspapers that the CNSC is carrying out a
25 hearing. And that's with respect to announcement of the

1 hearing itself.

2 With respect to the information, as I
3 stated before, once the CMD is published, then the
4 information is available to the requestor.

5 And in this specific case, when the
6 information was requested, as the secretariat previously
7 mentioned, the attachments were given with the CMD to
8 include the license application.

9 **MEMBER HARVEY:** But was -- for that
10 specific case, you are talking of a publishing
11 announcement or something in the newspaper or has it been
12 done in that specific case?

13 **THE CHAIR:** We ask the secretariat to --
14 what's the process for notifying -- what was the process
15 for this particular file?

16 **MR. LEBLANC:** The process in this regard,
17 in addition to those people who are either registered to
18 our website who get our notification or those that are on
19 mailing lists -- some it's by email; some it's by paper --
20 we -- what the Act and the rules requires us to do is to
21 publish a notice.

22 That notice is published both on our
23 website and also in various newspapers, depending of the
24 coverage that we want.

25 And Ms. Cumbow is from the U.S. We would

1 not have posted notices in newspapers in Michigan, for
2 example.

3 But they were posted in various areas of --
4 I don't have the exact name of the newspapers where it was
5 posted. Perhaps Aurele Gervais will send me an email and
6 I'll be able to answer later. I'm seeing him working on
7 the list. But that's how we do it.

8 That was published in the end of July, and
9 then in newspapers probably in the following days, and
10 then the revised notice because we added one day was
11 republished and was republished in the newspapers.

12 **MEMBER HARVEY:** Because it appears to me
13 not so difficult when there is a project in a specific
14 area, but in that case when you've got a long route, for
15 example, in the publication in Quebec, are you aware if
16 there has been?

17 **MR. LEBLANC:** I don't think it was
18 published in Quebec, but as I mentioned, Aurèle will
19 provide me with the list of the publications.

20 But don't forget, we also have our website,
21 we have our agendas. We have our forward agenda.
22 Somebody may know that in six, seven months we have this
23 or this item coming up.

24 So somebody who follows the Business
25 Commission could verify what is coming up and when they

1 should expect some documentation.

2 **THE CHAIR:** But Quebec people that were in
3 front of us aren't they automatically on our email, like
4 anybody associated with Gentilly-2 and in New Brunswick?
5 Wouldn't they automatically get notice?

6 **MR. LEBLANC:** Only if they have asked to be
7 put on our mailing list or registered themselves on our
8 system. If they're not registered, they won't get it.

9 And people from Michigan could register on
10 the list so they would get the notices as well.

11 **THE CHAIR:** Well, somebody who actually
12 knows the answer has disappeared. Could you please
13 answer?

14 **MR. GERVAIS:** Yes. Aurèle Gervais, for the
15 record.

16 The newspapers that were -- where the ads
17 appeared were the Brockville Recorder Times, the Kingston
18 Whig Standard, the Owen Sound Sun Times, the Sarnia
19 Observer, the St. Catherine's Standard, the Welland
20 Tribune and in l'Express de Toronto.

21 **THE CHAIR:** What about our mailing list,
22 the normal mailing list that we normally send the notices
23 to?

24 **MR. GERVAIS:** The notice would have gone
25 out to the subscription list that people had subscribed

1 for our website, and it was also sent out on our wire
2 service to those areas affected by the application.

3 And in this case, it would have been
4 similar to the newspapers that were published.

5 **THE CHAIR:** It doesn't go on the normal CP
6 -- the Canadian Press, all the newspapers and, you know,
7 all the -- I thought that automatically goes.

8 **MR. GERVAIS:** This was not sent -- we don't
9 send them nationally. We send them ---

10 **THE CHAIR:** I see.

11 **MR. GERVAIS:** We send them to the areas
12 where the facility is located, normally. And for this, we
13 did broaden our scope because we knew that there were
14 other areas affected.

15 **THE CHAIR:** And those that subscribe to us,
16 that's a big list, isn't it?

17 **MR. GERVAIS:** I'm not familiar with the
18 numbers, but yes, I'm told it's quite broad.

19 **THE CHAIR:** Yeah. It's always on the
20 website, right.

21 Okay. Thank you.

22 Any other question?

23 **MS. CUMBOW:** From me?

24 **THE CHAIR:** You want to say -- you want to
25 add a remark here?

1 **MS. CUMBOW:** Sure. What about adherence to
2 the Great Lakes Water Quality Agreement?

3 **THE CHAIR:** What do you -- sorry. What is
4 it -- what do you mean by the ---

5 **MS. CUMBOW:** The government of Canada is
6 responsible for the protection of the Great Lakes waters,
7 as is the United States, as is the indigenous and First
8 Nation.

9 **THE CHAIR:** Well, the IJC is fully aware of
10 this hearing. They have corresponded with us and we
11 replied to it. And I understand that they are -- they
12 have their mandate and they'll have to consider whatever
13 we decide here.

14 They'll do their thing and we do our thing.
15 But whatever we do, again, let me reiterate, if I
16 understand, whatever decision we will take will have to be
17 consistent with our preoccupation, with safety and impact
18 on the environment.

19 **MS. CUMBOW:** Since this action covers such
20 a huge -- the scope of the action is now much, much
21 broader than original, then it seems to me that the way
22 that Bruce Power normally contacts stakeholders would
23 dramatically change and I -- so I was not very satisfied
24 with that answer.

25 The other questions that I had were about

1 accident scenarios that -- what if there was a fire, an
2 explosion and a fire with a radioactive plume that might
3 keep fire fighters or first responders from approaching
4 the ship?

5 **THE CHAIR:** I don't know if you -- I think
6 -- I don't know if you heard yesterday or today, I think
7 we had a fire and the plume has been discussed.

8 But staff, maybe you want to reply to this?
9 And what about the scenario -- people keep talking about
10 those scenarios that you described today. Where are they
11 kind of described and written in a particular document?

12 **MS. CUMBOW:** Are you talking to me?

13 **THE CHAIR:** No, I'm talking to staff here.

14 **MS. GLENN:** Karin Glenn.

15 Staff prepared a technical memo and that --
16 and then -- for the bounding scenario. Even if we go and
17 we look at the EA that was done in 2006, they don't
18 evaluate 12 different scenarios with respect to their
19 transportation.

20 They discuss. They say, "Here's a few
21 scenarios. This is the bounding one" and then they go
22 into a full evaluation of the bounding one. They don't do
23 three or four different scenarios. They say this is the
24 most severe and this is the one we're going to evaluate.
25 And this is the same approach that -- this is consistent

1 with the approach that staff has taken on this one.

2 So the full evaluation was done on the
3 bounding scenario and then that's what's presented in the
4 CMD or summarized in the CMD.

5 **THE CHAIRMAN:** Okay. Thank you.

6 **MS. CUMBOW:** Thank you.

7 **THE CHAIRMAN:** We need to move on. Thank
8 you very much for your intervention.

9 The next submission is an oral presentation
10 from the Northwatch as outlined in CMD 19.35. I
11 understand that Ms. Brennain Lloyd is here to make the
12 presentation.

13

14 **10-H19.35**

15 **Oral presentation by**

16 **Northwatch**

17

18 **MS. LLOYD:** Thank you, Mr. Binder, and
19 Commission Members. My name is Brennain Lloyd and I'm
20 here on behalf of Northwatch.

21 Northwatch is a regional coalition of
22 environmental and social organizations in Northeastern
23 Ontario and we have appeared before the Commission a
24 number of times in the past, most often related to
25 licensing activities on the north shore of Lake Huron.

1 In the interests of brevity, I'm going to
2 leave with you my document submitted for the September
3 13th deadline which summarizes a number of our concerns
4 with the application, with the project, and we do not
5 support the project as proposed by Bruce Power.

6 We also summarized a number of concerns
7 that we had with the documentation provided.

8 I will say that, in our view, this
9 tribunal, this proceeding, and the public and the public
10 interest has been very poorly served in terms of the
11 quality of documentation and the analysis that's been
12 provided for you in the Commission Member Documents. And
13 I'm going to provide just three examples.

14 One example, and it comes from Section
15 4.2.3 -- it's page 21. The same wording appears in the
16 Executive Summary and it says:

17 "Members of the public, such as people
18 driving or walking by the steam
19 generators while they are in transit
20 on the highway, would not receive any
21 measurable dose."

22 Well, that's all well and good. That
23 should be the case. But that's about it in terms of the
24 discussion of dose and dose estimates. And I will say
25 that a document that doesn't provide us with more

1 discussion and more scenarios and, in particular, this is
2 a project which is going to include 16 shipments over a
3 period of -- I think it was 20-21 days we heard. And it's
4 going to be docked in the harbour in Owen Sound.

5 What I would expect to be provided in terms
6 of information for both the Commission and members of the
7 public is a full discussion of that, and I am particularly
8 interested in the dose, the exposure to people, receptors
9 living near, working near, walking near, recreating near,
10 boating near that place of docking. I didn't find
11 anything about that.

12 I want to know for example -- I would like
13 to know what's going to be the dose for a 5 year-old child
14 who lives 300 metres from where the ship is docked and is
15 resident for the full 20 days as an accumulating number of
16 generators are placed in that ship.

17 I don't know if there is a 5 year-old child
18 living 500 metres. There's no discussion of who will be
19 exposed by their proximity to the place where that boat
20 rests.

21 That's just an example of the kind of
22 discussion that I think should have been provided.

23 A second example -- and this is from page 3
24 in the CMD 10-H.19:

25 "As part of a CNSC field inspection,

1 staff performed swipe tests to verify
2 the external surfaces of the steam
3 generators for the presence of
4 contamination."

5 So we heard yesterday, I believe it was
6 yesterday -- it could have been today -- that these were
7 random swipe samples.

8 But the CMD goes on to say that:

9 "The swipe showed no radiological
10 contamination; hence there is no
11 presence of radiological material on
12 the surface of these steam
13 generators."

14 Well, I think that we can all agree that
15 the absence of evidence is not evidence of absence. So if
16 there are a random number of samples and a random number
17 of swipes, how many -- what's the statistical reliability
18 of that number of random swipes? There should have been a
19 discussion.

20 Third example, and this comes from the CMD
21 that was made available to us only on Monday, and Kevin
22 Kamps from Beyond Nuclear already discussed this so I'll
23 be brief, but the CMD showed us that there had been a
24 miscalculation in the dose from 3.6 terabecquerels to 5.46
25 terabecquerels. That's a 50 percent increase.

1 The CMD characterized it as an
2 administrative error. I would support Mr. Kamps' comments
3 earlier with respect to the significance of this increase,
4 but I really wanted to note to you that this is not an
5 administrative error. This is a substantive change in the
6 information that's been provided. And that substantive
7 change carries through -- perhaps, potentially -- through
8 the rest of what we've been given in the CMD's and what
9 you've been given in the CMD's.

10 So those are just three examples of where I
11 really don't feel the documentation has served the
12 discussion well.

13 We have two key concerns that I want to
14 speak to and, due to time limits, I'm only going to focus
15 on those two key concerns.

16 The first concern is with the respect to
17 the import and export of nuclear waste and how that --
18 what's the fit of this proposed export and then import of
19 nuclear waste in terms of Canadian law and policy?

20 In terms of federal government policy, I
21 think the radioactive waste policy framework which was
22 introduced in Phase IIB of the Seaborn Environmental
23 Assessment Hearing of Atomic Energy of Canada Limited's
24 Geological Disposal Concept in 1996 -- it's probably the
25 most relevant policy piece with respect to nuclear waste

1 management and it is silent on the question of
2 permissibility of export or as a waste management option,
3 but its direction strongly suggests that export is not
4 what the policy would direct.

5 It says, and I'll quote from the framework:

6 "The waste producers and owners are
7 responsible in accordance with the
8 principle of 'polluter pays' for the
9 funding organization, management and
10 operation of disposal and other
11 facilities required for their waste."

12 "Polluter pay" does not mean the polluter
13 pays someone else to take it away. "Polluter pay" means
14 you pay for the responsible management of that waste
15 material.

16 In the CMD's, the staff don't refer to the
17 radioactive waste policy framework. They do refer to two
18 other documents. They refer to Policy 290, Managing
19 Radioactive Waste, and to the CNSC Guidance document,
20 Decommissioning of Nuclear Facilities, and that's on page
21 3 to 4 of CMD 10-H.19.

22 They state that those policies further
23 promote recycling, such as Bruce Power is proposing be
24 done on their behalf. In contrast, our view is that P-290
25 -- in our review of P-290, we did not find it to include

1 in its purpose or its principles any statement that
2 supports the recycling the shipment of these wastes to
3 Sweden for recycling.

4 We found that the purpose was the
5 protection of health, safety of persons and the
6 environment, conformity with international controls and
7 obligations which Canada has agreed to, and consistent
8 national and international standards for radioactive waste
9 management. None of these are consistent with the Bruce
10 application.

11 The policy statement says that the
12 generation of radioactive waste is to be minimized to the
13 extent practicable. That's a statement in support of the
14 first R. There's three Rs -- reduce, reuse, recycle.
15 That's a statement in favour of the first R, I would
16 suggest, Reduce. It's not in support of reuse and
17 certainly not recycling as proposed by Bruce Power.

18 Nor did we find Guidance document 290 to
19 directly support recycling in general or the export for
20 recycling in particular. The only reference to recycling
21 is to keep recyclables separate from waste materials in
22 monitoring and process areas. We'd also note that G-290
23 is a guidance document for decommissioning, whereas this
24 is actually a refurbishment extension issue.

25 Thirdly, we note that Bruce Power contends

1 in their submission that their operating licence would
2 permit them to import the residual waste on the basis of
3 the waste being substances, and I quote from Bruce Power,
4 "Substances that arise from the operation of Bruce A."

5 We speculate that this contention rests on
6 really, really stretching a sentence that's in their
7 licence which says that Bruce Power may possess, transfer,
8 use, package, manage, and store nuclear substances other
9 than sealed and unsealed sources and approved devices
10 containing nuclear substances that are required for,
11 associated with, or arise from the activities described in
12 one," that activity being the operation of their nuclear
13 power plant.

14 I don't think that's a fit and I would
15 encourage the CNSC not to adopt this rather expansive and
16 elastic interpretation of Bruce Power's operating licence.
17 It would very much be an after-the-fact interpretation.

18 In summary, there is no policy in place in
19 Canada that supports this proposal to export Canada's
20 nuclear waste -- in this case refurbishment waste -- to a
21 foreign country. There is, however, a very high level of
22 concern in the Canadian public about the potential for
23 international trafficking in nuclear waste, and by
24 approving this application by Bruce Power the Canadian
25 Nuclear Safety Commission would become de facto

1 policymakers and I would suggest that that is both beyond
2 your mandate and outside the interests of Canadian people.

3 **THE CHAIRMAN:** Thank you very much. Your
4 time is up.

5 Mr. Graham?

6 **MEMBER GRAHAM:** Yeah, there was two
7 questions came up that I had listed to do in the next
8 round with us so it will cover those.

9 The first question is with regard to
10 stevedoring, working in the hull, strapping down those
11 generators and so on, workers will have to work there at
12 least 20 days, or approximately 20 days in working in the
13 hull. Has there been any type of study or anything done
14 with regard to dose that they may get working in a
15 confined area over that period of time?

16 **MR. LAPIERRE:** John Lapierre from WMG.

17 Yes, we did do a dose estimate for the
18 workers on the vessel that will be monitored during the
19 period that they are doing those activities and that has
20 been provided.

21 **MEMBER GRAHAM:** The model has been provided
22 and the amount of dose ---

23 **MR. LAPIERRE:** The dose estimate for
24 workers on the vessel has been provided to staff.

25 **MEMBER GRAHAM:** Okay. Staff, you've

1 reviewed that. It may be in the documentation. If it is
2 I missed it. Is there any harm to workers working for an
3 extended length of time in an enclosed area like the hull
4 of a ship?

5 **MR. JAMMAL:** For the record, Ramzi Jammal.
6 I will refer the explanation to Melanie
7 Rickard.

8 But to answer your question very quickly.
9 Is the Radiation Protection Program was evaluated to
10 include a certain dose to the worker with respect to their
11 work environment. In addition to the - modelling. The
12 dose, the workers will be wearing dosimetry badges. In
13 addition to it there will be a radiation control.

14 But I'll pass it on to Melanie for more
15 details.

16 **MS. RICKARD:** Melanie Rickard, CNSC
17 Radiation Health Sciences Division.

18 Mr. Jammal pretty much covered it, but yes,
19 we did review Bruce's assessment of the doses to the
20 workers. They actually provided us with three different
21 scenarios of sort of different types of workers and
22 different types of work that they may do over the course
23 of the 46 days.

24 And just to give you an idea, these are --
25 we consider them very conservative estimates, but they

1 range from about 1.8 millisieverts to 3 millisieverts for
2 the entire 46 days. Just to put that in perspective, the
3 dose limits, for example, for Canadian Nuclear Energy
4 workers is 50 millisieverts -- 50.

5 In this case they are actually -- the
6 workers on the ship themselves once the vessel is sea
7 bound will be working in accordance with a dose limit
8 that's consistent with Swedish dose limits because they're
9 more restrictive, and they've said that those dose limits
10 are 6 millisieverts. So the estimates are less than 6
11 millisieverts. They're very conservative. And as Mr.
12 Jammal mentioned, they are actually going to be monitored
13 with dosimeters so we will know what the actual dose is.

14 And in terms of Bruce Power, the workers
15 involved will also be wearing electronic personal
16 dosimeters in some cases so that will give them a real
17 time dose estimate, in addition to a dosimeter that will
18 be processed after the work is finished.

19 **MEMBER GRAHAM:** The other question I had --
20 thank you. The other question I had was with regard to
21 swiping, swipe testing of the generators. It wasn't clear
22 to me whether the last swipe test had been recent or not,
23 and -- because we didn't know that it was done three years
24 ago or two and a half years ago. How recent has the last
25 swipe test been done and how extensive is that swipe test?

1 **MR. JAMMAL:** For the record, it's Ramzi
2 Jammal.

3 I can answer that one easily, Mr. Graham.
4 Myself and staff went to the Bruce site. At the time we
5 were making a presentation to Owen Sound Town Council. We
6 did take radiation measurements with respect to the field
7 within the storage facility itself, and we've taken
8 samples, wipe test samples from multiple two or three
9 generators with respect to wipe tests.

10 So the answer is: it was done in July.

11 And then for the wipe test itself used our
12 internal process at the CNSC. Where the wipe is protected
13 and it's taken to the lab for analysis to ensure there are
14 no external contamination due to the handling of the wipe
15 test radiation were detected on the generators.

16 **MEMBER GRAHAM:** Not all of the generators
17 were swiped. That's just certain -- randomly they were
18 swipe tested, and how many were done?

19 **MR. JAMMAL:** Ramzi Jammal for the record.

20 I will start to say not all the generators
21 were done for two things. One of them was actually
22 physical capacity to enter between generators. And I will
23 have to ask the precision from Mr. Phil Eyre on how many.
24 I believe we did two or three generators.

25 **MR. EYRE:** Yes, we took some swipes from

1 two generators.

2 **MEMBER GRAHAM:** Are you confident that
3 gives you a sufficient reading that there might be one
4 leaking somewhere else, or did you have other detection
5 methods to tell if there may be a leak on a different
6 generator five down the row or whatever it is, however
7 they're stored?

8 **MR. HAWTHORNE:** Commissioner, if you don't
9 mind, can I answer that question, because it's back to the
10 situation. We are the Proponent. We swipe test all of
11 the boilers. We did that to all of these steam
12 generators. And CNSC staff chose then to do their own
13 independent verification of that.

14 So let's not have people think that we took
15 a random sample. Our responsibility is to confirm the
16 condition of all of these steam generators, and that is
17 what we did prior to sealing. CNSC staff then chose to,
18 one, review our information, and two, then to
19 independently collect their own.

20 **MEMBER GRAHAM:** When did you do yours, Mr.
21 Hawthorne?

22 **MR. HAWTHORNE:** Before we applied the
23 sealant. But we have done, as I mentioned several times.
24 This is not the first time we did it. Because we're
25 moving things from zones as part of transportation so

1 there's a range of things we've done all the way along the
2 way.

3 And if you don't mind me taking a bit of
4 exception to the term "leaking" because all the way
5 through this we've been saying there is nothing to leak.
6 We're talking about internal contamination inside tubes.
7 We've explained that the purpose of the swipe test is to
8 deal with is there any external surface contamination.
9 We've confirmed there is none and CNSC staff have
10 independently verified it.

11 **MR. JAMMAL:** Mr. Graham, if I may, Mr.
12 President, I would like to add a couple of things. The
13 regulatory process requires the Proponent, before they
14 move substances, and this case was a multi-transport of
15 the generators on site of Bruce Power. We reviewed the
16 process and methodology that Bruce Power has followed. In
17 addition to it, we verified the record and the
18 measurements that have taken of all the generators. So
19 when we were on site we had -- as a matter of fact we had
20 10 or so wipe tests available and we decided to take those
21 measurements.

22 **MR. HAWTHORNE:** Sorry to expand the
23 conversation, but I should also point out that we are
24 transferring these units from Bruce Power to Ontario Power
25 Generation. So in order to accept these steam generators

1 into their facility they also do their own verification of
2 the condition of the steam generators on receipt.

3 **MEMBER GRAHAM:** I realize that, but some of
4 them have been on the Western Waste Management site for
5 some time, have they not? So that's what I'm just
6 wondering -- the most recent, that's what I was trying to
7 get at.

8 **THE CHAIRMAN:** There's additional comment
9 going to be made.

10 **MR. HOWARD:** Don Howard, CNSC.

11 I'd just like to report that last week, the
12 Waste and Decommissioning Division had inspectors at the
13 Western Waste Management Facility to conduct a routine
14 Type-2 inspection. As part of that inspection, they did
15 some swipe testing on the generators. They took eight
16 random samples from the generators. I don't know how many
17 generators, just eight random samples, and all of the
18 samples have come back from our lab as no contamination.

19 **THE CHAIRMAN:** Dr. Barriault?

20 **MEMBER BARRIAULT:** One of the questions I
21 was going to ask -- is the radiation emission from these
22 16 generators at a distance of 300 metres? Can somebody
23 comment on that really?

24 **MR. JAMMAL:** For the record, it's Ramzi
25 Jammal.

1 I will pass it on to my colleague, Ms.
2 Rickard, but -- actually, I'll pass you on to Melanie.

3 **MS. RICKARD:** Melanie Rickard, CNSC.

4 I guess this is a pretty short one because
5 the answer is the dose is simply not measurable at those
6 distances.

7 The doses that were presented in the CMD
8 were chosen for a reason because we assess scenarios where
9 an individual may be, for example, driving or standing for
10 a short period of time at a relatively close distance as
11 the steam generators drop -- excuse me, drive by, and even
12 those doses were extremely low. So at distances where
13 people may be living, for example, by the docking area,
14 the doses would be miniscule, I guess, is the right word.

15 **MEMBER BARRIAULT:** And the doses walking by
16 the generator or on the sidewalks?

17 **MS. RICKARD:** Pardon me?

18 **MEMBER BARRIAULT:** The dose ---

19 **MS. RICKARD:** Oh, which is the dose when
20 the person is standing?

21 **MEMBER BARRIAULT:** M'hm.

22 **MS. RICKARD:** We calculated the dose to be
23 0.6 microsieverts and the public dose limit is 1,000
24 microsieverts, just to put that in perspective.

25 **MEMBER BARRIAULT:** Thank you, Mr. Chair.

1 **MR. JAMMAL:** Mr. President, may I add,
2 please, the principles of radiation protection is three
3 elements; distance, time and shielding.

4 In this case, everything is being applied.
5 The shielding as the exterior shell of the generator
6 itself. The distance is the -- not corridor -- but as the
7 shipment is taking place, there is a distance to where the
8 public cannot be close to and same thing when all the
9 generators are on the ship, there is a barricaded --
10 sorry, the word I'm looking for is barricades -- on the
11 road and around the ship at the port.

12 **THE CHAIRMAN:** Thank you.

13 Dr. McDill?

14 **MEMBER McDILL:** The intervenor raised the
15 suggestion that we might be making policy if this is
16 allowed. Could I have staff's comment on whether that is
17 the case?

18 **MR. HOWARD:** Don Howard, for the record.

19 The Policy P-290 talks about minimization.
20 Minimization can take many forms. What recycling is is a
21 best practice, an international best practice that is
22 promoted by the International Atomic Energy Agency.

23 Basically, we can look at minimization to
24 talk about recycling. We can talk minimization about
25 maybe we can re-use the material; maybe somebody else can

1 use it when you're done with it. We can talk about
2 reduction. So there are many ways of minimization.

3 This is just one of the best practices for
4 minimizing the amount of radioactive waste that you're
5 going to have to handle in the short- and long-term.

6 **MS. LLOYD:** If I may, I think that answer
7 was yes. I think the CNSC staff didn't say yes, but
8 that's what his answer was. Yes, you will de facto be
9 making policy.

10 He can talk about best practices. He
11 didn't speak to the question of, will you be making
12 policy. The policies they referred you to in the CMD
13 don't apply.

14 There isn't policy anywhere else that says
15 Canada is going to export and import nuclear waste from
16 decommissioned or refurbished -- reactors under
17 refurbishment. So the answer is yes. Staff didn't give
18 it. I can.

19 **MEMBER MCDILL:** I would rather hear staff
20 respond again.

21 **MR. JAMMAL:** Thank you. Ramzi Jammal, for
22 the record.

23 The clear answer is no, we're not making
24 policy. There are existing regulations that exist in
25 place and licence conditions. And as Mr. Howard talked

1 about with respect to minimization.

2 Everywhere you look with respect to the --
3 under the ALARA principle, under the -- Our regulation
4 itself is not prescriptive for a purpose. It's a
5 performance based where it allows the licensee to meet the
6 regulation, either by the prescriptive word-by-word or
7 proposing an equivalent or better methodology with respect
8 to the waste management.

9 And in this case: it is the recycling.
10 Fully fits with respect to the equivalency or even better
11 than requirements under the regulation.

12 **THE CHAIRMAN:** I'd like just to complicate
13 further.

14 A few intervenors mentioned the Seaborn
15 Task Force, but somebody correct me. I thought the
16 Seaborn Task Force dealt with long-term waste fuel storage
17 or did it deal with the heavy ore waste?

18 Can somebody correct me on that?

19 **MR. HOWARD:** Don Howard.

20 Yes, the Seaborn panel was struck to look
21 at the AECL concept of long-term management of spent fuel
22 in the Canadian Shield.

23 **THE CHAIRMAN:** So it was not to deal with
24 kind of a low-level material that we're talking about now,
25 for example?

1 **MR. HOWARD:** That's correct. It was not
2 struck to look at low- and intermediate-level waste. It
3 was struck to look at Canada's spent fuel.

4 **THE CHAIRMAN:** Okay. Thank you.

5 **MS. LLOYD:** And, Mr. Binder, my reference
6 to the Seaborn panel was simply to give the context for
7 when Natural Resources Canada introduced the radioactive
8 waste policy framework.

9 That was the reference that you heard from
10 me this evening, but the radioactive waste policy
11 framework deals with low, medium, high-level waste, not
12 just with nuclear fuel waste. It deals with radioactive
13 waste.

14 **THE CHAIRMAN:** Right, it does not prohibit
15 this kind of an activity?

16 **MS. LLOYD:** It doesn't permit it. It
17 doesn't ---

18 **THE CHAIRMAN:** It doesn't prohibit it.

19 **MS. LLOYD:** It does not prohibit it ---

20 **THE CHAIRMAN:** Well, it's ---

21 **MS. LLOYD:** -- but it provides direction
22 which is contrary to it.

23 **THE CHAIRMAN:** That is not what I heard
24 staff saying because they are measuring by radioactivity
25 level and I thought that was the point here.

1 **MS. LLOYD:** Staff didn't actually speak to
2 the radioactive waste policy framework. When -- the
3 references they gave you were a policy guide -- a CNSC
4 policy document and a guidance document.

5 Staff, in fact, did not reference the
6 radioactive waste policy framework. I've referenced that
7 and provided you with an excerpt from it which I think --
8 and I can state it again:

9 "Waste producers and owners are
10 responsible in accordance with the
11 principle of 'polluter pay' for the
12 funding, organization, management and
13 operation of disposal and other
14 facilities required for their waste."

15 I think that's the relevant section and I
16 don't think -- agreed, it does not prohibit export.

17 **THE CHAIRMAN:** But it's ---

18 **MS. LLOYD:** But it doesn't support export.

19 **THE CHAIRMAN:** --- but the waste -- well,
20 the waste is coming back. I'm missing something here.

21 **MS. LLOYD:** It also doesn't ---

22 **THE CHAIRMAN:** The waste is coming back.

23 **MS. LLOYD:** It also doesn't neither
24 prohibit nor support its import.

25 The waste is coming back doesn't make this

1 better, although certainly I don't support exporting our
2 radiological burden to other jurisdictions, but that
3 you're setting a precedent or that Bruce Power is asking
4 you to allow them to set a precedent for both the export
5 of nuclear waste -- radioactive waste -- and the import of
6 radioactive waste is no comfort.

7 **THE CHAIRMAN:** Okay. Thank you.

8 Anybody else? Dr. Barriault?

9 **MEMBER BARRIAULT:** Just one big question.

10 In the transportation of the generators,
11 are you looking at putting shields on them at all to
12 isolate -- or to insulate them completely?

13 **MR. HAWTHORNE:** For the record, Duncan
14 Hawthorne.

15 No, I think we showed you what happens
16 here. The steam generators are, in fact, the container.
17 They are the package. They are going to be secured in
18 saddles and the saddles themselves are going to be welded
19 to the deck.

20 **MEMBER BARRIAULT:** I'm sorry. We're
21 hearing that, but it was mentioned earlier that there is
22 some radioactive activity next to the generators when
23 you're standing there for any length of time.

24 And maybe I'm wrong in assuming this, but
25 that's why I'm going there. Are you going to shield these

1 at all?

2 **MR. HAWTHORNE:** No, but what we're doing is
3 we're controlling the environment. I think staff has
4 explained it and I'll explain again that we are talking
5 about standing in very close proximity. The only reason
6 we could ever get any measurable doses if someone in close
7 proximity for a significant period of time.

8 That's not possible. We have saddles. We
9 have separation. Mr. Jammal said it well. You know,
10 time, distance, shielding are the principles of nuclear
11 ALARA. That's what we do here, so we have steam
12 generators that we control access to, we control their
13 approach to, we structurally secure.

14 When the steam generators are in the
15 location we weld another section over the top and so we
16 provide another level of screening and rigid access to the
17 proximity of the steam generators.

18 **MEMBER BARRIAULT:** I was just responding to
19 the concern of the intervenor with regards to people
20 walking alongside the generator when it's coming down the
21 road and et cetera, that's all.

22 **MR. HAWTHORNE:** Yeah, a very legitimate
23 question, Commissioner, and you know, a fair one for
24 people in the community but I think we've answered the
25 fact that these steam generators to achieve any measurable

1 dose you have to be in very close proximity and we are
2 going to ensure that during its entire transit route that
3 isn't the case.

4 **MEMBER BARRIAULT:** Thank you.

5 **THE CHAIRMAN:** We've really got to move on,
6 unless there's a real burning question here.

7 **MEMBER GRAHAM:** I just have one that came
8 to my mind. If a person standing near a generator for a
9 period of time receives a dose of whatever it was -- 0.06
10 or whatever it was -- will the hull of the ship with those
11 generators sitting in the ship for the time of shipment --
12 will the hull of the ship become radioactive in any way or
13 will any of the radiation move into the metals in the
14 ship? And I'm not a scientist, so I don't know the
15 answer. That's what ---

16 **MR. JAMMAL:** Ramzi Jammal, for the record.

17 Mr. Graham, the amount of radiation, the
18 level of radiation is so low that there'll be no secondary
19 activations if you're asking will the ship become
20 radioactive. No, it's not.

21 In addition to the design and the loading
22 of the generators on the ship, a couple of things. The
23 water itself is one of the most effective shielding that
24 does exist with respect to radiation because part of the
25 ship is in the water. In addition to it, Dr. Barriault

1 asked the question will there be any extra shielding. On
2 the ship itself, will be double decking, that is an added
3 shielding factor.

4 However, we are starting from very low dose
5 and my -- still is very low dose. As a matter of fact, it
6 is decreasing and in the ship itself and the port, there
7 is a barricade for both security and radiation protection.

8 **THE CHAIRMAN:** Okay, thank you very much.
9 Thank you for the intervention.

10 Nous allons maintenant passer à la
11 présentation du Mouvement Vert Mauricie documentée sous le
12 numéro de CMD 10-H19.36. Monsieur Michel Fugère se joint
13 à nous par téléconférence pour cette présentation.

14 Monsieur Fugère, vous avez la parole.

15

16 **10-H19.36**

17 **Exposé oral par**

18 **Mouvement Vert Mauricie**

19

20 **M. FUGÈRE:** Merci, Monsieur Binder.

21 Monsieur le président, en vous remerciant
22 de nous avoir permis de participer à cette audience, j'en
23 profite aussi pour remercier tous les intervenants à la
24 rencontre.

25 J'aimerais aussi préciser un merci plus

1 spécifique aux citoyens, sans que le processus en cours se
2 serait déroulé sans que l'on puisse y intervenir.

3 Pour vous présenter le Mouvement Vert, plus
4 particulièrement en ce qui concerne le projet ici à
5 l'audience, le Mouvement Vert s'occupe de dossiers
6 énergétiques depuis plus de 20 ans maintenant.

7 Le dossier du nucléaire nous interpelle
8 plus particulièrement, bien entendu, parce que la centrale
9 nucléaire de Gentilly-1 et la centrale nucléaire Gentilly-
10 2 sont situées dans le territoire où nous habitons.

11 Concernant le nucléaire, le Mouvement Vert
12 a, depuis donc 20 ans, s'est prononcé de manière non
13 équivoque sur trois aspects plus particuliers, un contre
14 l'exportation et l'importation des déchets radioactifs des
15 centrales nucléaires, quelque soit leur origine, contre le
16 transport et la gestion permanente en territoire québécois
17 des déchets radioactifs provenant des centrales nucléaires
18 canadiennes ou autres.

19 Ici on fait exception, bien entendu, pour
20 des conditions historiques des déchets radioactifs des
21 centrales de Gentilly-1, Gentilly-2 et Pointe Lepreau, et
22 ce uniquement dans un scénario de déclassement de ces
23 centrales.

24 Troisième point où le Mouvement Vert s'est
25 particulièrement prononcé c'est celui plus récent qui

1 concerne le recyclage des déchets radioactifs, entre autre
2 dans des métaux pour fins d'utilisation dans des biens de
3 consommation.

4 La raison fondamentale de cette prise de
5 position du Mouvement Vert c'est au fait que les déchets
6 radioactifs posent des risques ayant des conséquences
7 irrémédiables pour les humains et les écosystèmes
8 essentiels à leur subsistance.

9 Mais revenons maintenant au sujet plus
10 spécifique qui nous réunit ici.

11 Monsieur le président, dans l'avis
12 d'audience publique transmis par la CCSN, on peut y lire
13 que le mandat de la Commission est d'assurer la santé, la
14 sûreté et la sécurité des canadiens ainsi que l'intégrité
15 de leur environnement.

16 Bien plus, l'avis de la Commission affirme
17 qu'aucune recommandation de délivrer un permis de
18 transport ne sera formulé à moins que la Commission ne
19 soit convaincue que l'expédition se fera de façon
20 sécuritaire et qu'elle ne présentera aucun risque pour la
21 santé, sûreté, sécurité et l'environnement des canadiens.

22 On doit donc en déduire que l'attention de
23 la Commission portera principalement sur le sort réservé
24 aux déchets radioactifs suite à l'entente d'affaires
25 convenue entre deux compagnies dont l'une est canadienne,

1 Bruce Power, et l'autre suédoise, la Studsvik.

2 Donc il serait important pour nous
3 d'éclaircir de quelle manière Bruce Power et la Studsvik
4 entendent contribuer à la diminution des risques associés
5 à la présence d'isotopes radioactifs contenus dans les
6 générateurs de vapeur dont il est question à cette
7 audience.

8 Ce projet de diminution des risques doit
9 être mis en comparaison avec le moyen actuel de les
10 minimiser et convenu suite à une audience publique
11 environnementale tenue en 2005. La CCSN d'ailleurs, tel
12 que vous le savez, a entériné en 2006 les recommandations
13 de cette audience.

14 On comprend que pour l'instant les déchets
15 radioactifs contenus dans les 16 générateurs de vapeur de
16 Bruce Power reposent sur le site d'OPG à Kincardine,
17 Ontario.

18 Alors comment Bruce et la Studsvik vont-ils
19 procéder pour minimiser ces risques? Alors d'après ce que
20 nous dit Bruce Power, la manière d'y arriver sera de
21 transporter via les Grands Lacs et la voie maritime du
22 Saint Laurent 16 de ces générateurs de vapeur pour des
23 fins de recyclage à destination de la Suède.

24 Ils vont, de plus, favoriser la réduction
25 du volume des générateurs de vapeur au profit de

1 l'industrie du recyclage des métaux. Ils vont faciliter
2 la dilution des métaux radioactifs dans des produits de
3 consommation courants.

4 Comme l'on sait, depuis toujours dans
5 l'industrie nucléaire, le concept de "dilution is a part
6 of the solution".

7 De plus, Bruce se propose pour minimiser
8 ces risques de rapatrier les déchets radioactifs impropres
9 à la dilution de l'environnement et les rapatrier chez
10 nous au Canada, d'après nos chiffres, que je suis sûr nous
11 pourrons vérifier lors de cette audience, environ 400
12 tonnes.

13 Et de plus, Bruce se propose de les
14 rapatrier de la Suède vers le port de Halifax pour ensuite
15 les amener à leur destination finale ontarienne par voie
16 terrestre à Kincardine.

17 Tant qu'à Studsvik, pour faciliter
18 l'atteinte des objectifs de Bruce à améliorer sa
19 performance environnementale de gestion des déchets
20 radioactifs, Studsvik prendra possession des enveloppes
21 des générateurs de vapeur radioactifs et les transformera
22 en lingots. Ensuite, il les rendra disponibles pour
23 utilisation dans le marché du recyclage des métaux.

24 On voit que pour Studsvik également, tout
25 comme Bruce, dilution is part of the solution.

1 De plus, Studsvik renverra au propriétaire,
2 Bruce Power, les déchets radioactifs non utilisables parce
3 que trop radioactifs à des fins de recyclage en les
4 incorporant dans des lingots, et ça, jusqu'au port de
5 Halifax.

6 Suite au cumul de ces opérations, il est
7 bien difficile d'argumenter qu'il y aura, au bout de
8 l'aventure, un gain environnemental et absence de risque.
9 Il est évident que le projet de Bruce et de Studsvik
10 contribuera plutôt à un déficit environnemental. Des
11 isotopes radioactifs seront inévitablement transférés dans
12 notre environnement.

13 La réduction du volume de générateurs de
14 vapeur ne représente pas pour nous un gain environnemental
15 mais bien une dispersion d'isotopes radioactifs dans des
16 objets de consommation courants et l'environnement.

17 La réduction du volume des générateurs de
18 vapeur permettra cependant un gain économique à Bruce,
19 comme le précise d'ailleurs son partenaire Studsvik dans
20 sa présentation à l'audience.

21 La CCSN devra juger à partir de ces faits
22 quel scénario entre le statut quo qui consiste à laisser
23 les générateurs de vapeur au site actuel de Kincardine et
24 celui proposé par Bruce Power. Quel scénario offre la
25 meilleure garantie de sûreté et de sécurité pour les

1 canadiens et pour les écosystèmes essentiels à leur
2 subsistance.

3 Maintenant j'aimerais aborder le processus
4 de consultation auquel la Commission canadienne de sûreté
5 nucléaire ainsi que Bruce Power nous ont convié.

6 Monsieur le président, si on peut
7 comprendre qu'une compagnie privée comme Bruce ait de la
8 difficulté à associer les populations à leur projet, il
9 est par contre particulièrement troublant de constater que
10 notre CCSN ait de la difficulté à favoriser cette
11 nécessaire participation.

12 Le nombre et la qualité des interventions
13 entendues lors de cette audience témoigne de cette triste
14 réalité et Bruce Power et la CCSN devront faire un retour
15 sur les événements et reconnaître que ce n'est pas parce
16 que l'on consulte que l'on consulte bien.

17 Les quelques heures que j'ai pu consacrer
18 au suivi de cette audience me laissent perplexe. Il est
19 triste de constater que le personnel de la Commission
20 semble s'acharner à vouloir soutenir, sinon promouvoir, le
21 projet de l'industrie.

22 La nécessaire indépendance de la Commission
23 canadienne de sûreté nucléaire par rapport à l'industrie
24 et sa mission de défense des intérêts des citoyens
25 canadiens nous semble trop souvent mise en veilleuse.

1 Nous espérons, monsieur le président, que
2 vous et vos collègues commissaires de l'audience pourront,
3 pour cette fois, remédier à cette situation.

4 **LE COMMISSAIRE:** Merci beaucoup.

5 **M. FUGÈRE:** J'aimerais maintenant parler
6 plus précisément du ---

7 **LE COMMISSAIRE:** Ah non, non, le temps est
8 passé.

9 **M. FUGÈRE:** Ah, mais ---

10 **LE COMMISSAIRE:** Parce que le 10 minutes
11 est dépassé.

12 **M. FUGÈRE:** Mais ce sera très rapide,
13 monsieur.

14 **LE COMMISSAIRE:** Oui, oui, c'est seulement
15 10 minutes pour tout le monde. C'est le même processus.

16 **M. FUGÈRE:** Oui, mais juste pour terminer,
17 je voulais vous dire que j'aimerais poser la question aux
18 intervenants impliqués à savoir comment est-ce que le
19 Québec a été interpellé dans le processus?

20 Les modifications des règles du jeu dans le
21 transport des déchets radioactifs produits par les
22 centrales nucléaires canadiennes est à ce point un intérêt
23 public et nous ne doutons pas que les instances politiques
24 appropriées ont été mises au fait du projet de Bruce Power
25 de transiter ses déchets radioactifs en territoires

1 voisins, les États-Unis et autres.

2 Mais qu'en est-il du Québec? Comment,
3 monsieur le président -- de quelle manière la CCSN et
4 Bruce ont procédé pour aviser les instances politiques
5 provinciales du Gouvernement du Québec plus spécifiquement
6 interpellé par ce dossier? Quels ministères ont été
7 interpellés? Quelles sont les municipalités qui sont
8 susceptibles de se retrouver sur le parcours aller-retour
9 des déchets radioactifs? De quelle manière ont-elles été
10 contactées par la CCSN et Bruce, et de même pour la
11 population québécoise en général?

12 Merci de votre tolérance.

13 **LE COMMISSAIRE:** Docteur Barriault.

14 **COMMISSAIRE BARRIAULT :** Le commentaire que
15 les isotopes sont dispersés, dilués et c'est une manière
16 de s'en débarrasser, j'aimerais demander aux membres de la
17 CCSN d'adresser ce commentaire.

18 Pouvez-vous adresser ce commentaire?

19 **M. RÉGIMBALD:** André Régimbald ici.

20 Comme on l'a expliqué hier et aujourd'hui
21 et dans la présentation de Studsvik, ce que nous
22 comprenons c'est que durant le processus, il y aura une
23 séparation des composants qui ne sont pas contaminés, de
24 ceux qui sont contaminés et ceux qui sont contaminés
25 seront rapatriés au Canada dans des colis autorisés par

1 les règlements.

2 Le représentant de Studsvik a expliqué que
3 les critères de relâchement sont extrêmement sévères et
4 qu'il y aura seulement une faible -- très faible
5 concentration d'isotopes dans les métaux qui seront
6 recyclés et qui rencontrent les normes internationales à
7 cet égard.

8 **COMMISSAIRE BARRIAULT:** Merci.

9 Sur la question du retour, rapatriement des
10 matières résiduelles après la fonderie à Studsvik, est-ce
11 qu'on sait que ça va rentrer par Halifax ou bien est-ce
12 que ça va rentrer par les ports de Montréal ou Québec?
13 Est-ce qu'on a une idée où ça va rentrer ça, ces matières-
14 là?

15 **Mme GLENN:** Karin Glenn.

16 Selon l'information qui a été soumise par
17 Studsvik, ils proposent d'envoyer par voie maritime
18 jusqu'au port de Halifax et ensuite par transport routier.

19 **COMMISSAIRE BARRIAULT:** Merci.

20 Merci, monsieur le président.

21 **LE COMMISSAIRE:** Alors est-ce qu'il faut
22 obtenir des licences ou des consultations avec les
23 ministères des -- quels ministères des gouvernements
24 québécois?

25 **M. FAILLE:** Sylvain Faille.

1 Non, il n'y a aucun permis qui est
2 nécessaire pour le transport ou le retour des matières
3 radioactives quand elles vont revenir au port de Halifax.

4 **LE COMMISSAIRE:** Monsieur Harvey.

5 **COMMISSAIRE HARVEY:** Merci, monsieur le
6 président.

7 Monsieur Fugère, dans votre document écrit,
8 la première page, le troisième paragraphe, vous écrivez:

9 "Le processus de
10 l'audience proposé par la Commission
11 canadienne de sûreté nucléaire ne
12 répond pas de manière adéquate aux
13 critères d'une véritable
14 consultation."

15 Pourriez-vous nous indiquer quels sont ces
16 critères?

17 **M. FUGÈRE:** Oui. En fait, grosso modo, il
18 y a des critères, d'abord un, d'assurer que tous les
19 intervenants qui participent à l'audience au point de
20 départ ont -- on s'assure qu'ils ont les moyens de
21 participer à l'audience.

22 Ensuite de ça, on s'assure que toute la
23 documentation leur est acheminée auparavant, qu'il y ait
24 une période où on peut questionner le projet, recevoir les
25 réponses des intervenants, assimiler ces réponses-là,

1 prendre la peine de vraiment approfondir le sujet et après
2 ça, pouvoir se positionner dans le projet d'une manière
3 plus approfondie.

4 Alors il y a des questions de disponibilité
5 d'information, de temps à allouer, de ressources
6 financières à allouer.

7 Je pense aussi qu'une consultation
8 semblable doit nécessairement mobiliser les instances
9 politiques appropriées et puis les intégrer au processus
10 dès les premières heures du projet. Je pense, par
11 exemple, au gouvernement provincial dans le cas du Québec.
12 Je pense, entre autres choses, aux municipalités du Québec
13 qui elles vont être plus spécifiquement interpellées par
14 le projet, parce que les déchets vont passer dans leur
15 cour.

16 Alors il faut que dès les premières heures
17 ces instances-là soient mises au fait du projet et puis
18 qu'elles puissent cheminer dans toutes les étapes de
19 l'élaboration du projet pour pouvoir intervenir et
20 comprendre et vraiment être proactives de manière positive
21 dans ces projets-là.

22 Alors je pourrai certainement faire
23 parvenir à la Commission un document détaillé qui pourrait
24 énumérer exactement quelles seraient toutes les conditions
25 à remplir pour qu'une consultation soit respectueuse et

1 des instances politiques qui sont concernées et la
2 population en général.

3 **COMMISSAIRE HARVEY:** Vous pouvez bien sûr
4 nous transmettre les documents, parce que contrairement à
5 ce que vous semblez indiquer, parce que vous continuez en
6 disant:

7 "Bien plus, il semble que la CCSN a
8 déjà unilatéralement décidé que le
9 projet de Bruce sans aucun risque de
10 sûreté..."

11 Mais tant que la Commission elle-même ne
12 fait pas son rapport, je pense qu'on peut pas présumer de
13 la décision.

14 **M. FUGÈRE:** Vous avez totalement raison à
15 ce niveau-là. Je me suis mal exprimé dans cet écrit. Ce
16 que je voulais mentionner c'est que le personnel de la
17 CCSN qui a investigué sur le projet a fait cette
18 recommandation-là.

19 Mais bien évidemment je ne pensais pas à ce
20 moment-là aux commissaires qui actuellement, vous et les
21 autres, allez faire l'analyse finalement du projet en
22 question.

23 **COMMISSAIRE HARVEY:** Merci.

24 Je m'adresserai maintenant au personnel.
25 Qu'est-ce que vous avez fait, parce que

1 Monsieur Fugère parle de contacter les instances
2 politiques. Qu'est-ce qui a été fait en Ontario?

3 **M. JAMMAL:** C'est Ramzi Jammal au
4 microphone.

5 Qu'est-ce qu'on a fait en Ontario c'est
6 franchement, on n'a pas discuté le projet avec le
7 gouvernement provincial parce qu'on n'a pas besoin de le
8 faire, mais il y avait des permis que Bruce Power est
9 obligé d'obtenir de la province, de la communauté ou bien
10 de chaque ville dans laquelle ils doivent obtenir le
11 permis.

12 Alors ça c'était -- c'est l'obligation du
13 tireur du permis à obtenir tous les permis nécessaires et
14 puis à ce moment-là ils font les communications et mettent
15 sur place les exigences nécessaires locales et
16 provinciales.

17 **COMMISSAIRE HARVEY:** C'est Bruce Power qui
18 a contacté ces municipalités-là ou c'est la Commission?

19 **M. JAMMAL:** C'est Bruce Power qui devrait
20 le faire.

21 **LE COMMISSAIRE:** Monsieur Harvey, Monsieur
22 Sawyer ---

23 **M. SAWYER:** Normand Sawyer.
24 Chief Nuclear Officer, Bruce Power.
25 C'est une opportunité de parler en

1 français. Comme vous le savez, j'ai venu ici à plusieurs
2 occasions avec une autre organisation.

3 Oui, c'est ça. Alors nous autres on avait
4 -- le fardeau était pour nous autres d'aller chercher les
5 permis pour passer. On a parlé d'Owen Sound, par exemple,
6 et puis dans les communautés, on a parlé au Sound, qui est
7 à côté de nous autres pour choisir la route plus
8 acceptable pour tout le monde.

9 Alors des discussions de même, on a fait ça
10 dans les dernières -- depuis le mois d'avril qu'on cherche
11 avoir notre permis pour faire le recyclage.

12 **COMMISSAIRE HARVEY:** Mis à part Owen Sound,
13 est-ce qu'il y a d'autres municipalités dont vous avez
14 contactées pour avoir -- dont vous aviez besoin de permis?

15 **M. SAWYER:** Bien oui. La route en Ontario
16 en particulier. Comme vous le savez, il faut avoir un
17 permis pour être sur la route. Alors une autre
18 organisation c'était OPP, la Police de l'Ontario. On a
19 parlé avec la Police de l'Ontario pour s'assurer qu'on
20 avait leur support à cause que quand on est en transit,
21 c'est eux qui vont être en avant ou en arrière du camion.

22 **COMMISSAIRE HARVEY:** Ça c'était pour la
23 route de votre transport routier?

24 **M. SAWYER:** Oui. On a été chercher les
25 permis nécessaires.

1 Alors nous autres, dans ce débat ici on
2 parle de fédéral, provincial. On veut pas rentrer dans
3 les politiques, mais c'est -- la demande se fait au
4 fédéral.

5 **COMMISSAIRE HARVEY:** Ce que je veux voir
6 c'est que Monsieur Fugère dit qu'il n'y a pas d'instances
7 politiques qui ont été contactées au Québec. Je voulais
8 voir un peu si ça avait été fait en Ontario, mais de ce
9 que je peux voir, il n'y a pas tellement de municipalités
10 ou de gouvernements qui ont été contactés?

11 **M. FUGÈRE:** Monsieur le commissaire, quand
12 on parlait tantôt d'une saine consultation, un village ou
13 une ville québécoise sur laquelle passe des déchets
14 radioactifs n'est pas moins importante qu'une ville
15 ontarienne.

16 **COMMISSAIRE HARVEY:** Non, mais c'est pas ce
17 que j'ai voulu dire. Je voulais voir qu'est-ce qui avait
18 été fait.

19 **M. FUGÈRE:** Non, non, non.

20 **COMMISSAIRE HARVEY:** Qu'est-ce qui avait
21 été fait.

22 **M. FUGÈRE:** Je le sais bien. Au contraire,
23 je comprends très bien le sens de votre question et puis
24 je rajoute à cette question-là, pour nous, c'est
25 exactement le sens de la question. C'est que s'il y a des

1 -- toutes les municipalités sur lesquelles devront passer
2 les déchets radioactifs possiblement doivent être
3 consultées. On ne peut pas juste prioriser une ville au
4 détriment d'une autre.

5 **COMMISSAIRE HARVEY:** On comprend très bien
6 le sens de votre intervention et je voulais voir vraiment
7 si en Ontario toutes les villes avaient été contactées et
8 je ne crois pas que ça soit le cas.

9 Toronto, par exemple, qui est en -- le
10 bateau va passer en face de Toronto. Est-ce que Toronto a
11 été contacté?

12 **M. FUGÈRE:** C'est une très bonne question
13 en effet, oui.

14 **LE COMMISSAIRE:** O.k. Est-ce qu'il y a
15 d'autres questions?

16 **COMMISSAIRE HARVEY:** Juste une autre
17 question.

18 L'explication pour avoir contacté les
19 villages aussi, c'était pour le transport des génératrices
20 sur les camions qui vont aller au port de Owen Sound.

21 Une question que j'aimerais vous demander,
22 Monsieur Fugère, j'ai compris que vous avez eu de la
23 difficulté à avoir l'information au commencement pour
24 préparer votre papier, c'est ça?

25 **M. FUGÈRE:** Non, non, non. Moi,

1 personnellement, je dois avouer que l'information de ce
2 qui se passait actuellement de ce dossier m'est arrivée,
3 somme toute, assez tardivement dans le processus parce que
4 j'ai des amis qui eux ont été mis au courant de la
5 situation.

6 Mais c'est vraiment à l'écoute de
7 l'audience aujourd'hui où j'ai entendu pendant quelques
8 heures des citoyens, des représentants des autochtones,
9 des représentants d'organismes municipaux ou de citoyens
10 où j'ai vu que là finalement on n'avait pas été les seuls
11 laissés dans les limbes.

12 Ça fait que finalement, nous sommes très
13 nombreux à avoir été finalement presque évacués du
14 processus.

15 **COMMISSAIRE HARVEY:** O.k. Merci.

16 On prend note de votre intervention.

17 **M. FUGÈRE:** Merci beaucoup.

18 **LE COMMISSAIRE:** Merci beaucoup pour votre
19 intervention, Monsieur Fugère.

20 Alors il faut bouger.

21 **M. FUGÈRE:** Bon, bien, merci, Monsieur
22 Binder. À Bientôt.

23 **LE COMMISSAIRE:** À bientôt.

24 We'll move now to the next submission,
25 which is an oral presentation from the Canadian Coalition

1 for Nuclear Responsibility as outlined in CMD H19.37 and
2 H19.37A. And I understand Dr. Gordon Edward will make the
3 presentation.

4 The floor is yours.

5
6 **10-H19.37 / 10-H19.37A**

7 **Oral presentation by**

8 **The Canadian Coalition**

9 **for Nuclear Responsibility**

10
11 **DR. EDWARD:** Thank you, Mr. Chairman.

12 And I would like to thank the Commissioners
13 for having these hearings. It's really a wonderful thing
14 to be able to talk about these important issues in front
15 of this panel.

16 And I also would like to say that, in
17 general, the information that's made available by the
18 Commission is really good.

19 The fact that you show these things by
20 webcasting, the fact that the documents and the minutes
21 are posted on the internet is really, really helpful to
22 people.

23 That being said, I have to say that the
24 information base for this particular project is woefully
25 inadequate and that it's unfortunate.

1 I understand that it was not anticipated to
2 be a hearing, but I understand that that's part of the
3 reason perhaps. But there certainly is inadequate
4 documentation for this hearing, and I will reference a few
5 of those things.

6 I started asking on July 14th with emails,
7 a series of emails asking for information. I never got
8 any reply to any of them except one email I said I'd like
9 to at least have an acknowledgement that you received my
10 emails, and I received a reply saying, "Yes, we got them."
11 But there were no answers.

12 Now, with regard to the -- I do believe
13 that we, on the CCNR, strongly believe that we need a full
14 environmental impact assessment for this, and we believe
15 that the Commission should not grant a licence for this
16 particular endeavour for several reasons.

17 First of all, you have a very good reason
18 not to grant a licence, and that is because the maximum
19 amount of radioactivity is exceeded. And I think that the
20 CNSC has every right not to grant a licence, and I think
21 they should not grant a licence.

22 I think that when we talk about making
23 special provisions for the degree of radioactivity that
24 the nuclear industry wants to accommodate, that seems to
25 be easy, but when it comes to making special provisions to

1 replaced components cannot be recycled
2 and must be disposed of at the WWMF. It
3 is considered..."

4 And not only do they say that it cannot be
5 recycled, but they then go on to explain why it doesn't
6 make -- it wouldn't make much difference if it was
7 recycled in terms of environmental helpfulness because
8 they say, and this is again quoting from the same
9 paragraph.

10 "It is considered unlikely that the
11 disposal of contaminated metal waste
12 at Bruce A would measurably affect the
13 availability of these materials in
14 Canada or elsewhere."

15 In other words, the failure to recycle
16 these so-called clean metals is insignificant -- would
17 make an insignificant difference to the metal supply.

18 So I think this is the stated opinion of
19 the CNSC staff at that time. There's no reference to this
20 at these hearings. Shouldn't there be some explanation as
21 to why they're in flat contradiction of their opinion of
22 2006?

23 Then we have Bruce Power's presentation to
24 the Saugeen Ojibway on April 2005 which is also documented
25 in my submission, quote, this is on page 4. Quote, this

1 is what they said to the Saugeen Ojibway:

2 "Scrap metals which are proven not to
3 be radioactive are recycled. However,
4 much of the waste and particularly low
5 and intermediate level waste
6 containing radioactivity cannot be
7 recycled for safety and environmental
8 reasons. This waste is transferred to
9 OPG's Western Waste Management
10 facility where it is processed to
11 reduce its volume prior to being
12 placed in storage."

13 In other words, all the volume reduction is
14 to take place at the Western Waste Management facility and
15 that was the promise to the Saugeen Ojibway -- no
16 pussyfooting around. That's the way it is.

17 Also we have, for example, from the Steel
18 Manufacturer's Association document which is also quoted
19 in our submission, quote, and this is of 2009-2010 by the
20 way:

21 "Steel Manufacturers Association
22 members have not and will not accept
23 scrap that is known to be
24 radioactively contaminated.
25 Furthermore, the unrestricted release

1 of radioactively contaminated metal
2 from nuclear facilities for recycling
3 would tarnish the image of recycling
4 and potentially lead consumers to
5 avoid products made of steel
6 especially those who have high
7 recycled scrap steel content."

8 Now my contention is, on the basis of the
9 research I've done, is that nobody wants this stuff except
10 the nuclear industry. Now the IAEA has been frequently
11 mentioned. It's important to mention that the primary
12 mandate of the IAEA is to promote the expansion and use of
13 nuclear technology and my contention is that only the
14 nuclear promoters want this to happen. Nobody else wants
15 it to happen.

16 So I don't know why the Commission should
17 be bending over backwards and perhaps bending some rules
18 in order to facilitate this when it's not for any good
19 purpose. The thing is that it's one thing to have medical
20 isotopes which are doing people some good and helping
21 patients and doctors. It's another thing to have medical
22 isotopes which are helping industry to do their job in
23 their field. Nobody wants this stuff.

24 It's not a question of a commodity, it's a
25 question of a waste material which is being disseminated

1 into consumer products and which will be there without the
2 consumer's knowledge. These will not be labelled as
3 radioactive waste objects, they will simply be there.

4 Again, some of the materials in the waste
5 are very long lived and are -- we're talking about tens of
6 thousands of years of half-life and also exceedingly
7 toxic. So I come to the question of the nature of the
8 waste.

9 Now, again, I find it distressing that for
10 an outsider just walking into the room -- in fact I heard
11 somebody who's never been to one of these hearings before
12 say to me, "You know, I can't tell the difference between
13 the Proponent and the staff. The CNSC staff and the
14 Proponent, they say the same things. They sound the same
15 way."

16 And from an outside point of view, it
17 appears that the staff is not merely advising the
18 Commission but pressuring the Commission to give a go-
19 ahead for this. They're acting as if they're the
20 Proponent.

21 I think that the staff in this case is
22 really seriously misguided and has been giving you bad
23 advice and I think you have to think about this from a
24 larger perspective from the point of view of the integrity
25 of the Commission as perceived around the world.

1 When we come to the nature of the waste, it
2 has been said, for example, that 64 grams is all we have.
3 Now what's the purpose of saying that other than to
4 minimize the problem? But it's not added that that 64
5 grams, 32 to 40 grams of that 64 is plutonium-239. How
6 come that's not mentioned?

7 If you look at the list that is in the
8 Bruce -- the list of radionuclides you will notice that
9 the largest contributor is plutonium-239 which is between
10 2 and 2-1/2 grams of the 4 grams in each of the steam
11 generators.

12 Now plutonium-239 is a very long lived and
13 highly toxic material. If they're going to give grams,
14 why don't they say what the toxicity of that is, how many
15 lethal doses that represents? According to my
16 understanding, I believe that this amount would be
17 approximately a million overdoses. You could overdose a
18 million people with that amount of plutonium.

19 Now I'm not saying that this is not to
20 scare people, but to put it into perspective. Why is
21 there no talk about the toxicity of any of these
22 materials? Isn't the Commission supposed to be in the
23 business of protecting the health and safety of people in
24 the environment?

25 Isn't the Commission staff supposed to

1 giving you good advice as to how to better inform
2 Canadians about the potential dangers and then inform them
3 about why those potential dangers are not going to become
4 actual dangers rather than simply dismissing and saying
5 there's no danger, no impact, perfectly safe?

6 I don't think this does the Commission
7 credit and I don't think this does the staff credit.

8 Now turning to the specific calculations
9 that the staff did, on the 13th of this month, I sent our
10 submission in and I pointed out in my submission that
11 there are four radioisotopes. These are only four that I
12 happened to identify: niobium-95, ruthenium-106,
13 plutonium-241 and yttrium-90 which are not listed in the
14 list of radio-nuclides in the steam generator.

15 The approximate values of these things
16 would more than double the inventory of the first steam
17 generator from Bruce A, for example. This approximately
18 doubled the total inventory.

19 How do I know that these isotopes are there
20 in these quantities? The reason is because of the table
21 which is attached to the appendix that I asked to be
22 distributed to you. It's a table from Ontario Power
23 Generation and it's a table called "Table 3.2 Estimated
24 Reactor Refurbishment Radionuclide Inventory at 2018."

25 So in other words, they're forecasting what

1 the inventory will be in the year 2018. I presume,
2 therefore, that the present inventory is if anything
3 slightly higher and they say in the footnote on the
4 previous page actually, page 17 down to the bottom there -
5 - they say, "This data comes exclusively from the Bruce A
6 steam generators".

7 And they have there these isotopes:
8 niobium-95, ruthenium and so on. So I have explained to
9 you exactly how I arrived at my estimates. I simply used
10 the ratios that they have in their table and applied them
11 to the CNSC table and come up with double the amount of
12 radioactivity.

13 So the plutonium-241 is the only one they
14 identified but they've overlooked a lot and their
15 arithmetic has not been good and their analysis has --
16 doesn't lend confidence.

17 Now why is this important? The reason it's
18 important is because the classification which they have
19 chosen for these steam generators, the SC01
20 classification, allows them to make exemptions; it allows
21 them to make special arrangements.

22 My understanding is -- and I may be wrong
23 about this because this regulations are a little difficult
24 to understand -- but if you just go a little over the
25 limit then you're into a different category which is SC02

1 and my understanding is you cannot make those special
2 arrangements when you get into SC02.

3 So if the inventory is significantly
4 underestimated, then you're in the wrong category and it
5 allows you to allow the industry to do things they
6 wouldn't otherwise be allowed to do.

7 Now the -- if you look at the figures that
8 are given by the latest edition, the one that was only
9 produced a couple of days ago about the plutonium-241,
10 you'll notice that they say the amount towards the limit
11 for the SC01 category is already about 40 percent.
12 They've already achieved about 40 percent of the limit so
13 if you double that and then go a little further, you have
14 exceeded the limit.

15 I also am a little concerned -- more than a
16 little concerned, I'm really quite upset -- that staff and
17 Bruce Power has misrepresented many things and one of the
18 things they've misrepresented is what these numbers
19 represent.

20 They do not represent surface
21 contamination. On the contrary, it is explicitly stated
22 that this amount of radioactivity is what's allowed in
23 inaccessible surfaces. That is the inner surfaces of the
24 object, not the outer surfaces. So to try and pretend
25 that these limits only pertain to external contamination

1 is completely false and a misrepresentation of the facts.

2 If we also come to the fact, as I mentioned
3 earlier ---

4 **THE CHAIRMAN:** I've been really liberal
5 here. You're way, way over time. Could you please wind
6 it up?

7 **DR. EDWARDS:** Okay, I'd just like to
8 conclude by saying I have a lot more to say about the
9 nature of the waste. It's in the brief and so I'd ask you
10 please to read it but 10 minutes is obviously difficult
11 and I appreciate the fact that we have to keep the time
12 but this is why we need an environmental assessment
13 because we need to be able to examine the assumptions that
14 the staff is making, the assumptions that the Proponent is
15 making and show the Commissioners and the public what is
16 the real situation.

17 And this is regardless of whether the
18 shipment is ultimately deemed to be safe, acceptably safe,
19 or not.

20 Thank you.

21 **THE CHAIRMAN:** Thank you.

22 You raise lots of questions. I think we're
23 going to have some discussion here.

24 Dr. McDill?

25 **MEMBER McDILL:** Thank you. I think the

1 first thing we need to do is address the potential for the
2 missing radionuclides. Bruce did scrapings and analysis.
3 Where are these coming from?

4 **MR. HAWTHORNE:** So let me just start by a
5 couple of comments. A lot of material there, you know,
6 and the suggestion of scientific understanding, so let me
7 start by saying -- do you know what the half-life of
8 niobium-95 is? Does anyone know?

9 Three and a half days -- yeah, 35 days.
10 Sorry. ruthenium-106? Do you know what the half-life is?
11 One year.

12 My point is we can answer these
13 calculations. The table that's referred to is actually an
14 inventory produced by OPG on the assumption that all of
15 the units are decommissioned on the site and all of the
16 waste goes there. It was a waste assessment. So those
17 numbers relate to a large number of steam generators. In
18 fact, everything on our site plus Pickering units.

19 So there's a significant difference in the
20 calculation and the tables. I'll ask my colleague if he
21 can explain a bit more detail about that but this is a
22 problem with numbers being misrepresented and expanded.

23 We're talking here about 16 steam
24 generators. We're talking about low-level waste. We're
25 talking about the quantum of radioactivity that exists

1 within this shipment. And what's been presented here is a
2 full inventory of a fully decommissioned nuclear site
3 being stored in a waste facility. The table is for a
4 different purpose and the calculations relate to that.

5 As I say, if you think about the half-lives
6 of these radionuclides you start understanding why they
7 are not mentioned here because obviously the half-lives
8 are such that these steam generators have been out of
9 service for a significant period of time.

10 I'll hand over to Frank Saunders to give a
11 bit more information.

12 **MR. SAUNDERS:** Frank Saunders, for the
13 record.

14 Yes, essentially this was a planning tool
15 for OPG and the work was done by Kinetrics and in fact the
16 samples that are used from Bruce A were a lot of the same
17 samples that we based our inventory on. However, when
18 you're looking at the waste site for 2018, you're assuming
19 the decommissioning of all the plants in Ontario
20 essentially, or the refurbishment somewhere between 2014
21 and 2019.

22 So you're talking about a very short decay
23 period on those particular steam generators. Bruce A Unit
24 1 and 2 are distinctly different in that they were --
25 they've been out of service for 15 years or thereabouts.

1 So the shorter lived isotopes are actually going to be
2 pretty much gone and that's why some of them are
3 different, the short-lived ones.

4 The yttrium-90 is actually included in the
5 strontium-90 calculations. The plutonium-241 was a
6 transcription error. We've talked about that already
7 yesterday. It was actually in the Kinetrics report but
8 when we created the table somebody just left it out and as
9 soon as we discovered that we corrected it and sent it in
10 so that information has been known and the calculations
11 were re-done and it didn't make any material difference in
12 the information presented.

13 So that's basically the story. And
14 actually if you read the little paragraph at the bottom of
15 that table, it makes it pretty clear that this is in fact
16 an inventory for not only Bruce, Pickering and Darlington,
17 it's all the steam generators in Ontario, assuming that
18 they were all -- and all those units were refurbished and
19 all the steam generators needed to be replaced and they
20 were all put in storage which is, you know, clearly from a
21 planning purpose and from a waste facility that's fine but
22 that's not the inventory that we provided you.

23 **THE CHAIRMAN:** Sorry. Since the document
24 has been tabled here, I really take as an example -- I
25 want to understand this table. Take NB-93-M. It says

1 beside it "T one-half" in years -- 1.4 E. I'm trying to
2 understand. Is that the half-life?

3 So it doesn't -- so I don't understand, so
4 that is 14 years. Does that mean it's there in 2008? It
5 should be still here in 2010, right? If it's going to be
6 there in 2018?

7 **MR. SAUNDERS:** It will have -- you've got
8 about approximately a third of it left, I guess.

9 **THE CHAIRMAN:** So why is it not on the
10 list? That's what I'm missing still.

11 **MR. SAUNDERS:** Sorry, which one were you
12 referring to? 93-M?

13 **DR. EDWARDS:** And 93-M is actually a bad
14 choice, Mr. President, because if you look at the steam
15 generators column -- I know this table is a little
16 confusing.

17 There are different columns and the second
18 last column is called "Steam Generators." And if you look
19 in the steam generator column ---

20 **THE CHAIRMAN:** Okay.

21 **DR. EDWARDS:** --- the 93-M is not there but
22 the 95 is, and the amount of Becquerels is quite large for
23 the 95, niobium-95. It's 5.2 with a decimal moved over 12
24 times. So 5.2 times 10 to the 12th power.

25 That's a large inventory of niobium-95 and

1 the question is if it is so short-lived as it is, why is
2 it still there in 2018 according to OPG? Do they not know
3 their job?

4 **MR. SAUNDERS:** So the answer is, this is
5 for 128 steam generators, some of which would have been
6 taken out of service within two years rather than the 15
7 years that the Bruce Unit 1 and 2 steam generators were
8 out of service.

9 So on that particular one, the half-life is
10 something like 150 half-lives so there wouldn't be much
11 left.

12 **THE CHAIRMAN:** Okay. Thank you.

13 I think Dr. McDill, you're still on?

14 **MEMBER McDILL:** I think my question was
15 answered. I wanted the public to understand where they
16 weren't in this question.

17 **THE CHAIRMAN:** So that -- but that was an
18 important point then to deal with the SC ---

19 **MEMBER McDILL:** The packaging.

20 **THE CHAIRMAN:** --- packaging.

21 So with that explanation, are you now
22 satisfied that the SCO-1 is the right certification or
23 not?

24 **DR. EDWARDS:** Well, no I'm not because
25 again if you look at the -- there's no description of

1 exactly how these numbers are arrived at. And my
2 contention is that nobody knows what's really inside these
3 steam generators. They have done a limited amount of
4 sampling and they found that it's highly in-homogenous and
5 there's a lot of guesswork involved.

6 For example, if you look in the table that
7 the CNSC staff provided, you'll see that the discrepancy
8 is sometimes eight-fold between a steam generator from
9 Unit 1 and a steam generator from Unit 2. I just have to
10 get it in front of my eyes, but I don't have that table in
11 front of me at the moment.

12 **MEMBER MCDILL:** It's page 31 of the staff -

13 --

14 **THE CHAIRMAN:** But while you're looking for
15 this, I think that ---

16 **DR. EDWARDS:** Well, anyway, the point is
17 that you see that there's a lot of discrepancies. Some of
18 the radionuclides are twice as much in the one steam
19 generator as in the other. Some of them are eight times
20 as much as they are in the other.

21 This suggests, and I believe to be true, that there's a
22 great deal of estimation going on here and even the basis
23 for which these estimates are being made is unclear. Now,
24 the alpha emitters and the beta emitters are completely
25 undetectable from outside the steam generator. They do

1 not have enough penetrating power to go through the wall.
2 It's only the gamma that goes through the wall, and the
3 neutrons.

4 So that's all they can actually measure
5 from outside.

6 **THE CHAIRMAN:** I don't know if you were
7 listening to the explanation that was given to over the
8 last two days both by Bruce Power and staff that over the
9 years they did have access and they did measure and they
10 did study -- again, I'm putting words in your mouth, so if
11 somebody will help me on this.

12 And therefore, they have a very good
13 knowledge of the inside. That's the argument they all
14 made.

15 **DR. EDWARDS:** Yes, I think this is
16 inconsistent with their statement that it's highly
17 inhomogeneous and if it were homogeneous they could
18 classify it in a different way.

19 The fact that it's inhomogeneous means that
20 you need a very large amount of testing in order to know
21 this. My understanding is -- and correct me if I'm wrong
22 -- my understanding is that they have over the years
23 removed a very few of these 5,000 tubes inside each steam
24 generator, a very few of them.

25 And by the way, they've also reported that

1 they have rather high radiation doses for the workers in
2 the process of removing those tubes. So they're a little
3 concerned about that.

4 But at any rate, they really have only
5 checked a few tubes out of the 5,000. This is not a
6 statistically significant sample and there is a lot of
7 uncertainty in terms of -- they did not measure for all
8 these isotopes. A lot of these isotopes are estimated on
9 the basis of calculations which are -- well, they're
10 basically back-of-envelope calculations I believe.

11 **THE CHAIRMAN:** Okay. I think I will let
12 Bruce Power and then staff answer that.

13 **MR. HAWTHORNE:** So on several occasions
14 this intervenor has said "correct me if I'm wrong", so I'm
15 going to try and correct him if he's wrong.

16 The table that he's relied on heavily said
17 that these results are based on actual measurements taken.
18 We have explained several times that we do remove tubes.
19 We also explained how the boiler is constructed and how
20 the flow of D₂O through these tubes is in fact not
21 preferential. They are treated the same way.

22 So it's very statistically valid to take
23 cut-up examples of tubes in a laboratory situation and
24 measure the radionuclides that are present and from that
25 very reasonably calculate accurately the degree of

1 radionuclides present.

2 It's also reasonable for us in that same
3 analysis to confirm that those radionuclides have in fact
4 plated out inside the tubes, as good science would tell
5 you because of the temperature change that takes place in
6 the D₂O as it passes through the tubes as we mentioned
7 yesterday.

8 Very clearly understand that plating out a
9 cause when that happens -- we see that in the tubes when
10 we take the tubes out, when we cut them apart, when we
11 examine them, when we measure the contents and we confirm
12 also as pointed out -- we can't measure everything by
13 monitoring the radiation, so it's a combination of
14 radiation measurements, physical examination of tubes, a
15 statistically valid sample, recognizing the duty that
16 those steam generators said.

17 As we mentioned, the reason for differences
18 between Unit 1 and Unit 2 are the operational duty those
19 units have seen. As mentioned earlier, Unit 2 came out of
20 service before Unit 1. Different operational life for the
21 units and, not surprising, a different characteristic
22 around those.

23 But I think we have said several times that
24 we use bounding conservative cases to make our argument.
25 We pick the longest lived, the most operational duty. We

1 provided that as a bounding case for information. We
2 analyzed on the basis of that, and staff independently
3 confirmed the accuracy of those calculations.

4 **THE CHAIRMAN:** Thank you.

5 Dr. McDill?

6 **MEMBER MCDILL:** My second question is with
7 respect to H19.37A, page 19 of Dr. Edwards' commentary
8 with respect to the Youtube video.

9 **THE CHAIRMAN:** I'm sorry?

10 **MEMBER MCDILL:** It's actually for Bruce.
11 It's H37A, page 19 under Dr. Edwards' statement about
12 Oversight Number 6 and a video of the removal of a Bruce A
13 steam generator.

14 It's the blue -- if you look for the blue
15 Youtube link, about third line -- second line from the
16 bottom.

17 **MR. HAWTHORNE:** Yeah, sorry. What's the
18 question?

19 **MEMBER MCDILL:** Would you like to comment
20 with respect to the workers repeatedly wiping the outside
21 surface of the steam generator?

22 **MR. HAWTHORNE:** Well, I've mentioned that
23 several times.

24 **MEMBER MCDILL:** Yeah.

25 **MR. HAWTHORNE:** The logic here is we are

1 transporting material as we would do from any zone. Any
2 transmitting of material between one zone to another we
3 monitor as part of our process.

4 That's a requirement as you move through
5 various zones in the plant. These steam generators are
6 one zone. We're moving them into an unzoned area and
7 there's a requirement to monitor at that barrier.

8 **MEMBER MCDILL:** Thank you.

9 But the question is, you are not attempting
10 to remove radioactivity. You are swiping for adverse ---

11 **MR. HAWTHORNE:** Yeah, we're sampling.

12 **MEMBER MCDILL:** Thank you.

13 I think that's not clear.

14 **DR. EDWARDS:** Well, that's 400 counts per
15 minute. That's not too bad. But we'd like to get it down
16 to zero if we can, so that video is on the web. One can
17 look at it.

18 They do have, I believe, external
19 contamination to begin with and they do wipe that
20 contamination in order to remove it. And my understanding
21 was that it's not 100 percent.

22 Is it true they start off with external
23 contamination?

24 **MR. HAWTHORNE:** I've tried this several
25 times; I'm a patient man.

1 We've said we've swabbed all of these steam
2 generators. We've checked all of them. We've checked
3 them all for surface contamination. We've provided that
4 information to CNSC staff.

5 They have independently verified their own
6 view of that and agreed with us that there is no surface
7 contamination.

8 You know, we've said it and we've said it,
9 and we've said it.

10 **THE CHAIRMAN:** Staff, you wanted to ask
11 something?

12 **MR. JAMMAL:** Thank you, Mr. Chair.

13 I would like to move on to the point that
14 Mr. Edwards made with respect to the interpretation of
15 staff with respect to surface-contaminated objects. And
16 I'm going to read it word by word, sir, from the IAEA
17 Safety Standard Regulation for the Safe Transport of
18 Radioactive Material.

19 The point Mr. Edwards makes that we've
20 twisted, misinterpreted the regulation, I would like to
21 start by reading it:

22 "Surface contaminated object, SCO, shall
23 mean a solid object which is not itself
24 radioactive, but which has radioactive
25 material distributed on its surface.

1 SCO shall be in one of two groups, SCO-
2 1, a solid object on which (i) the non-
3 fixed contamination on the accessible
4 surface average over 300 centimetres
5 squared or the area of the surface if
6 less than 300 centimetres does not
7 exceed 4 becquerels for beta gamma low
8 toxicity alpha emitters. Second
9 requirement, the fixed contamination on
10 the accessible surface average over 300
11 centimetres or the area of the surface
12 if less than 300 centimetres squared
13 does not exceed, again, 4⁴ becquerels."

14 (As read)

15 Continue on. And (iii):

16 "The non-fixed contamination plus the
17 fixed contamination on the inaccessible
18 surface average over 300 centimetres
19 over the surface does not exceed for the
20 beta and gamma emitters low-toxicity
21 alpha." (As read)

22 So the surface contamination is we -- you
23 meet any of those, and that's the surface contamination
24 object applies for.

25 **DR. EDWARDS:** I agree with that, Mr.

1 President, and I would like to find out that is the third
2 requirement -- it's the third requirement which the CNSC
3 applies, and that's to the inaccessible surfaces. And
4 it's that requirement that they say they're already up to
5 about 40 percent, 36 percent, 41 percent of that limit.

6 But these are -- these limits are the
7 internal contamination of the object because they are not
8 looking at those other considerations. They're looking at
9 the internal contamination.

10 And it's with regard to the total
11 radioactivity of such an object that they are exceeding
12 the standard by six or 50, depending upon whether you look
13 at the freshwater or saltwater situation.

14 **THE CHAIRMAN:** You want to reply to this?

15 **MS. GLENN:** I also want to add there's
16 another paragraph which also applies to unpackaged
17 surface-contaminated objects, also in the same set of
18 regulations, paragraph 523, which says:

19 "The SCO1 may be transported unpackaged
20 under the following conditions..."

21 And condition (c) of the paragraph says:

22 "...for SCO-1 where it is suspected that
23 non-fixed contamination exists on
24 inaccessible surfaces in excess of that
25 paragraph..." (As read)

1 It says:

2 "...measures shall be taken to ensure
3 that the radioactive material is not
4 released into the conveyance." (As read)

5 So even if the -- for some reason the
6 estimates are off with respect to some degree with the
7 non-fixed contamination, the provisions of the regulations
8 still allow for the transport of the material, provided
9 that the contamination on the inaccessible surfaces, which
10 in this case are the internal surfaces of the steam
11 generators, cannot be released into the environment.

12 **DR. EDWARDS:** May I, Mr. President?

13 **THE CHAIRMAN:** Please go. I mean, I'm
14 enjoying this.

15 **DR. EDWARDS:** Well, it's -- this is why we
16 need an environmental assessment because these are a
17 little complicated and they require further discussion.

18 My point is that if you were to triple the
19 amount of radioactivity, for example, you would exceed the
20 limits that classify it as an SC01 object and it's only
21 for the SC01 object that you are allowed to send it
22 unpackaged.

23 Once you get into the category of an SC02
24 object, I don't believe that applies. I don't believe
25 that sending it unpackaged is an option anymore.

1 So therefore, there is a vested interest in
2 downplaying the radioactive inventory, and that means it's
3 very important for the Commission to ensure that this is
4 not being downplayed and that it really does fit the
5 categorization.

6 But even if it doesn't fit that
7 categorization, my contention is the Commission still has
8 a very good reason not to licence this because it does
9 exceed the maximum radioactivity and there's no public
10 interest reason why this should go ahead.

11 I don't believe that you can find anything
12 that is really in the public interest that makes this
13 shipment necessary. It's only to save some money for the
14 nuclear industry and, therefore, I don't think the
15 Commission should be in the business of bending any
16 regulations in order to facilitate that.

17 **THE CHAIRMAN:** Well, it's not -- my
18 understanding, it's not presenting to us here, maybe
19 wrongly, as a business proposition. It's a volume
20 reduction and a recycling proposal which we are assessing
21 against burying those 64 big -- into the ground as opposed
22 to recycling and reducing volume.

23 Those are the two options in front of us
24 here, and my -- you know, at least -- you know, my bottom
25 line understanding of what is being presented is

1 container, steel container, thick container is a good
2 shield. It's a good package ---

3 **DR. EDWARDS:** Exactly.

4 **THE CHAIRMAN:** --- for that particular
5 thing.

6 **DR. EDWARDS:** So leave it there and bury it
7 as such.

8 **THE CHAIRMAN:** And therefore, it's safe to
9 transfer it.

10 **DR. EDWARDS:** Well, that's why it's good to
11 leave it and bury it as such. When it's sent to Sweden,
12 they're going to disassemble this thing and they're going
13 to crumble those pipes. They're going to release a lot of
14 dust and a lot of radioactive -- as a matter of fact, if I
15 may, this is also from the environmental assessment of a
16 couple of years ago.

17 Oh, excuse me. Well, I'm sorry. Here it
18 is. Gosh, I seem to be missing a sheet.

19 There's a quotation about accident
20 scenario. Let me read you this. Again, this, I think,
21 flatly contradicts some of the things that have been said
22 here today.

23 This is from the Bruce Power environmental
24 assessment of 2005 on page 3-37, this is also in my
25 submission. It says -- this is verbatim:

1 "Accident scenario: A transportation
2 related accident during the transfer
3 of the old steam generators between
4 Bruce A and the WWMF may occur leading
5 to a radiological contamination that
6 could reach onsite workers and members
7 of the public. Materials present as a
8 gas or as a very fine powder are more
9 likely to escape. Carbon-14 is the
10 most abundant radionuclide and would
11 probably be present either as a gas or
12 as a very fine particulate." (As read)

13 And then on page 318, which is earlier
14 actually, the same document, it says:

15 "Based on the screening of possible
16 conventional malfunction and accident
17 scenarios..."

18 And remember this is in the context of only
19 moving it that short distance:

20 "Based on the screening of possible
21 conventional malfunction accident
22 scenarios it was determined that two
23 events are credible, namely a steam
24 generator drop and a refurbishment
25 waste container drop. Other

1 postulated potential accidents are
2 found to have very limited potential
3 to result in radiological
4 consequences." (As read)

5 So I believe that if you look at the
6 wording of these paragraphs in this environmental
7 assessment you get a different picture than the one we've
8 been given today.

9 Now, I don't know whether I'm misreading
10 these. It's possible. I'm not infallible. But when I
11 read that I say there's something there that can be
12 released, they have already identified it as such. And of
13 course when they talk about a steam generator drop as
14 being one of the accident scenarios that is plausible,
15 then you immediately say well if they're now moving it to
16 Sweden what kind of drops are possible that would not have
17 been possible if they were just using it -- moving it to
18 the Western Waste Management Facility.

19 **THE CHAIRMAN:** Okay. Thank you.

20 Any other questions? Anybody want to say
21 anything else?

22 Okay. Thank you very much.

23 **DR. EDWARDS:** Thank you.

24 **THE CHAIRMAN:** The next submission is an
25 oral presentation from the Physicians for Global Survival,

1 as outlined in CMD 19.38, and we have Dr. Dale Dewar make
2 the presentation.

3 The floor is yours.

4

5 **10-H19.38**

6 **Oral presentation by the**

7 **Physicians for Global Survival**

8

9 **DR. DEWAR:** Thank you, Mr. President.

10 I would echo Dr. Gordon Edwards' thank you
11 for having this open hearing. We at Physicians for Global
12 Survival are very pleased to have an opportunity to
13 present some of our position on the matter of radiological
14 wastes.

15 Our major concern and I -- my submission,
16 many other people have spoken to some of the submissions
17 concerns about accidents and recycling of radioactive
18 wastes, but underlying those concerns, which my Board
19 wanted me to bring forward to you, was the fact that the
20 radioactivity in the environment is constantly increasing
21 and the potential for it to continue to increase.

22 We're already heard a number of depositions
23 referring to waste that has escaped containment at various
24 times in the past decade and this waste, as we all know we
25 all live in a global village, and there is a limit to the

1 amount of waste in which the world can take care of.

2 So we're concerned about the effects of
3 radioactivity upon human health and upon the human genome
4 into the future.

5 In this we share the concern of the World
6 Health Organization who in 1958 tabled a report which
7 read:

8 "The genetic heritage is the most
9 precious property for human beings.
10 It determines the lives of our
11 progeny, healthy and harmonious
12 development of future demonstrations.
13 As experts we affirm that the health
14 of future generations is threatened by
15 increasing development of the atomic
16 industry and sources for radiation."

17 (As read)

18 Technical Report Number 151, page 59 of the
19 WHO in Geneva and 1958.

20 And I would like to point out that the
21 World Health Organization never makes another statement
22 regarding health and radioactivity, because in 1959 an
23 egregious agreement between the World Health Organization
24 and the IAEA meant that all future statements with regards
25 to health and radioactivity would be made -- would be

1 vetted by the IAEA first.

2 And as you've already heard about, the
3 International Atomic Energy Committee Agency, which has
4 the mandate to accelerate and enlarge the contribution of
5 atomic energy to peace, health, and prosperity, and like
6 to point out that the IAEA is made up solely of
7 representatives of countries which produce radioactive
8 substances. So the producers, suppliers and police are
9 one in the same.

10 Throughout the history of human contact
11 with radioactive substances and elements, decisions for
12 its safety have been made by producers and suppliers.
13 There has been very little input from physicians or
14 medical researches.

15 The Radiation Effects Research Foundation,
16 or RERF, was convened by the U.S. Atomic Energy Commission
17 in the 1950s to study the health effects of radiation on
18 the Japanese population, and out of that it set minimally
19 allowable standards for exposure and these standards have
20 been gradually -- have been referred to over the years.

21 They also made that statement at that time
22 and made popular the belief that the health side effects
23 of exposure to low dose radiation must be negligible
24 because humans constantly receive background radiation
25 from the environment, the sun, and mostly we don't get

1 cancer; however, we do know that the increased --
2 increasing our radiation exposure to sun does result in
3 increased cancers.

4 The International Committee on Radiation
5 Protection, or the ICRP, is made up of 13 countries which
6 produce or depend upon the uranium market, hence, the
7 reference to the exposure limits of radiation being based
8 on the ALARA principle. For those who don't know what
9 that means that means as low as is reasonably achievable
10 given costs to the industry. Clearly this is an industry-
11 set standard not a healthcare-set standard.

12 A comparison would be to have tobacco
13 companies in charge of acceptable exposure to tobacco.

14 When you, Mr. President, asked the CNSC if
15 an intervenor earlier this afternoon was correct in
16 referring to the IAEA standards I don't want to slight the
17 CNSC as specialists but I'd like to point out the safety
18 dose limits, while quite conservative, have never been
19 adequately prospectively researched. They have never been
20 prospectively researched.

21 All of the evidence we have for
22 radiological effects on the human being have been based on
23 retrospective and sometimes epidemiological studies which,
24 as every researcher knows, are the poorest possible --
25 researchers, and many of the problems that exist are the

1 length of time required for doing these health studies,
2 the progeny, we need to be studying the children and the
3 grandchildren, the effects upon the germ cells and the
4 effects upon the mitochondria.

5 I'm impressed by all the monitoring that
6 people are reporting; however, I want to point out that
7 wearing a dosimeter means that you're monitoring the
8 effect after it has occurred.

9 The past decade -- I'm going to go back to
10 the question of the IAEA and the WHO rather egregious
11 agreement. There have been many calls for independence of
12 the industry from the healthcare. The Canadian Public
13 Health Association and the World Organization of Family
14 Practitioners and also the World Medical Association have
15 requested separation of the two.

16 The European physicians -- and I've just
17 come back from a conference of International Physicians
18 for Prevention of Nuclear War. The European physicians
19 there are up in arms. The U.K. and Sweden have hundreds
20 of thousands of hectares of unusual -- unusable land, and
21 the health effects of Chernobyl have not been published
22 beyond that which the IAEA has permitted.

23 One of the most authoritative bodies on
24 radiation health has been a committee of the U.S. National
25 Academy of Sciences on the biological effects of ionizing

1 radiation, and until BIER 7 came out it was often quoted
2 by the -- sorry -- the industry as being -- as allowing
3 low levels of radiation to be considered healthy.

4 However, BIER 7 will not be quoted.

5 It finally came to the conclusion that
6 there was no level of radiation below that which radiation
7 could be considered safe.

8 I was really -- I would like to just close
9 by saying while I admire BP's altruism and concern for the
10 environment in reusing and recycling and possibly reducing
11 the volume of waste, I would like to point out that the
12 mantra by environmentalists includes a fourth step and
13 that is refusing. And I really believe that in this case
14 we should be refusing to transport waste in any direction
15 as I understand from today listening to the presenters
16 that the steam generators were not only going to be
17 transported in one direction, but then we are going to be
18 expected to transport and transport safely the more highly
19 radioactive waste back across the Atlantic and somehow or
20 other, it's going to come through the same water system
21 and end up in a safe position.

22 Thank you.

23 **THE CHAIRMAN:** Thank you.

24 It's open. Mr. Graham?

25 **MEMBER GRAHAM:** Yes, there was a comment

1 with regard to research and I know Dr. Lane is here.
2 Perhaps you might want to comment on what was referred to
3 as lack of sufficient research?

4 **DR. LANE:** Rachel Lane, yes.

5 The amount of research that has been done
6 on radiation is perhaps the most research done on any
7 carcinogen in the world. A couple of points I'd like to
8 make.

9 First of all, hereditary effects. The
10 intervenor was talking about the World Health
11 Organization's declarations in 1958. Well, in 2001, the
12 United Nations Scientific Committee on the Effects of
13 Atomic Radiation whose mandate is to look at the sources
14 and the health effects from radiation. This committee is
15 composed of 21 countries with their scientific experts
16 meeting regularly once a year to discuss the research
17 including epidemiology, radiation, biology, health,
18 physics, laboratory, animal studies, et cetera, et cetera,
19 all on the sources and effects of radiation.

20 They published a document in 2001 on the
21 hereditary effects and their conclusion was there is
22 absolutely no evidence of hereditary effects from
23 radiation in human populations. However, they have
24 noticed that there is evidence of hereditary effects in
25 animal studies and therefore hereditary effects are taken

1 difficult to understand how much of the disease is related
2 to radiation.

3 However, there are other scientific
4 disciplines such as radiation biology, chemistry, physics
5 in which you can understand radiation much better at low
6 doses. And this is where we understand mechanisms of
7 radiation. So by putting the wealth of our science
8 together we can understand how radiation works.

9 We talked a little bit here about the BIER
10 7 and how levels of radiation -- there is no level of
11 radiation that is safe. The Canadian Nuclear Safety
12 Commission as the United Nations Scientific Committee on
13 the Effects of Atomic Radiation and the International
14 Commission on Radiological Protection base their way of
15 assessing risk based on the linear, non-threshold model.

16 This is basically based largely on the
17 atomic bomb survivor studies as well as all the other
18 studies that have been conducted. Basically, the risk is
19 proportional to dose. As I said earlier, at high and
20 moderate doses, we understand the risk very well. At low
21 doses, the health effects are not being observed so
22 therefore, it's much more difficult to really understand
23 these risks and that's where we go to radiation, biology,
24 chemistry and physics to understand radiation better.

25 But we take a conservative approach

1 **THE CHAIRMAN:** Sorry ---

2 **DR. DEWAR:** A long-term baseline health
3 study. Now ---

4 **THE CHAIRMAN:** Sorry, I have got to
5 interrupt you because I don't know if you've seen the
6 enormous studies we've done on -- the Commission has done
7 on tritium and some of the studies which will help me here
8 on Port Hope and we are now commissioning -- we are
9 participating in some international studies.

10 **DR. DEWAR:** Oh, boy.

11 **THE CHAIRMAN:** So please -- by the way,
12 many of them are open to a lot of people to participate
13 in.

14 **DR. LANE:** Yes, there have been lots of
15 studies that have looked at people in the vicinity of
16 nuclear facilities. The COMARE has done a series of
17 reports looking at these studies of people living in the
18 vicinity of nuclear facilities. There have been several
19 hypotheses. One is that it's due to preconception --
20 parental preconception exposure. COMARE has found that
21 that does not occur in children living near facilities.

22 Environmental exposure has once again been
23 disproved. There is a hypothesis called a Kinlen
24 hypothesis and that is an infectious agent which is the
25 most probable reason for children having childhood

1 leukemia around nuclear facilities.

2 There have been studies of people living
3 around uranium facilities throughout the world and these
4 have been well documented in reports such as the United
5 Nations Scientific Committees on the Effect of Atomic
6 Radiation.

7 **DR. DEWAR:** I'm well aware of these studies
8 and I reviewed and spent an extensive time last year
9 reviewing them for the Saskatchewan Medical Association.

10 I would like to point out that almost all
11 of these studies suffer from one fatal flaw and that is
12 that they are dependent upon industry's self-reporting of
13 emissions. And in the case of the KIKK study, these are
14 based on three month -- if I understand correctly, they're
15 based on interval emissions.

16 The other issue that is not addressed in
17 terms of radiation exposure is in terms of -- and this is
18 safety of radiation exposure -- is we have sort of safety
19 levels for workers. We're talking healthy workers. We're
20 not talking people who are unhealthy. We have do not have
21 safety levels for children. We do not have safety levels
22 for foetuses. So we sort of ---

23 **THE CHAIRMAN:** Okay. Thank you.

24 Any other questions?

25 Okay. Thank you for your intervention.

1 The next presentation is from Dr. Erika
2 Simpson and Dr. Gordon Edwards and they were not able to
3 attend and we just heard from Dr. Edwards. So their
4 submission will be considered as a written submission.

5
6 **10-H19.75**

7 **Written submission from**

8 **Erika Simpson and**

9 **Gordon Edwards**

10
11 **LE PRÉSIDENT:** Alors, nous allons
12 maintenant passer à la présentation de la ville d'Amqui
13 sous les numéros de documents CMD 19.73 (sic) et 19.73A.

14 Le maire d'Amqui a délégué monsieur -- 76,
15 oh, je m'excuse. Le maire d'Amqui a délégué monsieur
16 Philippe Giroul pour présenter ce mémoire. Il nous
17 rejoint par téléconférence.

18 Monsieur Giroul, vous avez la parole.

19
20 **10-H19.76/10-H19.76A**

21 **Mémoire de**

22 **la ville d'Amqui**

23
24 **M. GIROUL:** Merci, Monsieur Binder.
25 Bonsoir, mesdames et messieurs. Mon nom est Philippe

1 Giroul de Trois-Rivières, responsable des communications
2 au mouvement Sortons le Québec du nucléaire.

3 Monsieur Gaëtan Ruest, maire d'Amqui à
4 l'extérieur du pays, m'a mandaté pour vous livrer le
5 message suivant.

6 Le 26 août dernier, nous avons envoyé à 184
7 municipalités et sept MRC du Québec le message suivant:

8 "Objet: deux objets.

9 1) Alerte aux élus des municipalités
10 susceptibles d'être situées sur le parcours maritime et/ou
11 terrestre du futur transport de déchets radioactifs.

12 2) Requête de solidarité aux municipalités
13 et villes spécifiquement concernées.

14 Chers collègues, ayant récemment été avisé
15 que des municipalités riveraines des Grands Lacs et du
16 fleuve Saint-Laurent ont politiquement manifesté leurs
17 inquiétudes auprès des instances américaines et
18 canadiennes appropriées concernant le projet de la
19 compagnie ontarienne Bruce Power de procéder au transport
20 maritime et terrestre de certains de ses déchets
21 radioactifs, je m'empresse de vous transmettre quelques
22 informations susceptibles de concerner plus spécifiquement
23 votre municipalité.

24 En effet, prenez note que Bruce Power
25 projette de transporter certains de ses déchets

1 radioactifs vers la Suède en utilisant la voie maritime
2 des Grands Lacs et du fleuve Saint-Laurent.

3 Une partie de ceux-ci, les plus
4 radioactifs, reviendraient au Canada par voie maritime à
5 destination du port d'Halifax pour ensuite être acheminés
6 vers sa destination finale ontarienne par voie terrestre.

7 Votre municipalité étant susceptible de
8 figurer sur le parcours du transport de ces déchets
9 radioactifs, nous vous transmettons quelques documents
10 pertinents pouvant faciliter votre compréhension des
11 enjeux relatifs à ce dossier.

12 Une résolution permettant à votre
13 municipalité de joindre les rangs des opposants à ce
14 transport radioactif est également mise à votre
15 disposition.

16 Si votre municipalité accepte d'adopter
17 cette résolution, pouvez-vous nous la faire parvenir?
18 Nous la transmettrons à l'audience de la Commission
19 canadienne de sûreté nucléaire du 29 septembre.

20 Pour nos enfants et les enfants de nos
21 enfants, merci de prendre en considération ce message.

22 Gaëtan Ruest, maire d'Amqui, porte-parole
23 des municipalités qui ont adhéré à la résolution
24 municipale 'Le sort du nucléaire au Québec, un choix de
25 société' qui regroupe à ce jour 271 municipalités

1 qu'ébécoises."

2 Je sais que les commissaires ont lu la
3 résolution municipale pour interdire le transport de
4 générateurs de vapeur radioactifs par les Grands Lacs et
5 le fleuve Saint-Laurent.

6 Notre intention est de prendre le temps qui
7 nous est alloué pour s'assurer que tous les participants à
8 cette audience ici sur place et aussi ceux qui suivent
9 cette audience par webdiffusion puissent entendre les
10 motivations des 30 municipalités qui souhaitent l'arrêt
11 définitif de ce genre de projet.

12 Si vous me le permettez, je vais lire la
13 résolution qui comporte 15 attendus et quatre
14 recommandations. Cet exposé prendra environ six à sept
15 minutes.

16 "Attendu que Bruce Power œuvre à la
17 réfection de plusieurs des huit réacteurs nucléaires
18 qu'elle détient au Lac Huron, au coût de plusieurs
19 milliards de dollars;

20 Attendu que ce projet de réfection implique
21 le démontage et le remplacement de milliers de tubes et
22 tuyaux corrodés et radioactifs provenant du circuit
23 primaire des réacteurs touchés, et qu'ils seront stockés
24 sur place en tant que déchets radioactifs;

25 Attendu que le projet de réfection implique

1 aussi le démontage et le remplacement de 32 énormes
2 générateurs de vapeur radioactifs, chacun pesant
3 approximativement 100 tonnes, chacun ayant environ les
4 dimensions d'un autobus scolaire et chacun contenant des
5 milliers de tuyaux radioactifs puisqu'ils servaient au
6 transport du liquide de refroidissement circulant dans le
7 cœur d'un réacteur nucléaire;

8 Attendu que les tuyaux à l'intérieur des
9 générateurs de vapeur désuets sont contaminés par des
10 produits de fission comme le cobalt 60 et le césium 137,
11 par des actinides tels que le plutonium, l'américium et le
12 curium et par des produits d'activation comme le tritium
13 et le carbone 14;

14 Attendu que parmi les contaminants
15 radioactifs dans les générateurs de vapeur désuets on
16 trouve des émetteurs alpha, bêta et gamma dont certains
17 ont des demi-vies mesurées en décennies, en siècles ou
18 même en millénaires;

19 Attendu que Bruce Power, malgré tous ses
20 efforts, n'est pas parvenue à retirer toute la
21 contamination radioactive de ces générateurs de désuets;

22 Attendu que Bruce Power a signé un contrat
23 avec la société suédoise Studsvik qui recevra 32 de ces
24 générateurs de vapeur radioactifs en provenance du
25 Complexe nucléaire de Bruce pour recycler le maximum du

1 métal moins contaminé afin de le transformer en ferraille
2 à usage commercial, pour ensuite retourner à Bruce Power
3 les composantes les plus contaminés pour stockage en tant
4 que déchet nucléaire;

5 Attendu que le recyclage en ferraille à
6 usage commercial de matériaux radioactifs provenant de
7 réacteurs nucléaires ne devrait être ni autorisé, ni
8 encouragé;

9 Attendu que Bruce Power a annoncé son
10 intention de faire transiter les générateurs de vapeur
11 désuets par les Grands Lacs et le fleuve Saint-Laurent
12 vers la Suède;

13 Attendu que le transport de déchets
14 radioactifs via le Saint-Laurent et les Grands Lacs est
15 une pratique qui ne devrait pas être autorisée à cause du
16 danger de contamination radioactive à long terme;

17 Attendu que la perception publique très
18 négative associée au transport de déchets radioactifs
19 influerait sur la paix d'esprit des gens et ferait baisser
20 la valeur des propriétés foncières le long de la route de
21 transport, surtout dans l'éventualité d'un accident
22 impliquant ces envois;

23 Attendu que le transport des générateurs de
24 vapeur désuets via les Grands Lacs établirait un dangereux
25 précédent ouvrant la voie à d'autres transports de déchets

1 radioactifs;

2 Attendu que le bassin des Grands Lacs et du
3 fleuve Saint-Laurent contient près de 20% des ressources
4 mondiales en eau douce de surface, qu'il est une source
5 d'eau potable pour plus de 40 millions de personnes, qu'il
6 soutient une industrie de la pêche de 4 milliards de
7 dollars et un écosystème étonnamment diversifié et
8 fragile;

9 Attendu que la santé du bassin versant des
10 Grands Lacs et du Saint-Laurent est déjà suffisamment
11 compromise par la contamination radioactive persistante
12 venant des émissions routinières et accidentelles de plus
13 de 50 sites nucléaires, un fardeau radioactif qui ne
14 devrait pas être aggravé par le transport de générateurs
15 de vapeur radioactifs;

16 Enfin, attendu que le plan de Bruce Power
17 pour le transport des générateurs de vapeur radioactifs
18 par les Grands Lacs et le fleuve Saint-Laurent vers la
19 Suède n'a jamais fait l'objet d'un examen public avec
20 consultation, ni par les citoyens, ni par les
21 gouvernements locaux le long des routes terrestres et
22 maritimes, ni par les gouvernements provinciaux, étatiques
23 ou nationaux, ni par les populations tribales autochtones
24 des États-Unis, ni par les divers peuples autochtones du
25 Canada, ni par les gouvernements souverains des peuples

1 autochtones vivant le long des voies navigables
2 ancestrales situées sur le parcours proposé, ni par des
3 organisations internationales telles que la Commission
4 mixte internationale;

5 Par conséquent, quatre résolutions. Il est
6 résolu:

7 1. que nous nous opposons en principe à
8 tout transport par les Grands Lacs et le fleuve Saint-
9 Laurent de tout déchet nucléaire ou de matériel contaminé
10 par la radioactivité provenant du démantèlement, de la
11 réfection ou de l'exploitation courante de réacteurs
12 nucléaires;

13 2. que nous demandons avec insistance aux
14 gouvernements du Canada et des États-Unis, ainsi qu'aux
15 gouvernements autochtones et souverains des peuples
16 autochtones des États-Unis et des diverses nations des
17 peuples autochtones du Canada ainsi qu'aux peuples
18 autochtones vivant le long des voies navigables
19 ancestrales de la route proposée le long des Grands Lacs
20 et du fleuve Saint-Laurent, d'exiger que le transport de
21 générateurs de vapeur désuets via les Grands Lacs et le
22 fleuve Saint-Laurent n'ait pas lieu;

23 3. que nous demandons avec insistance aux
24 gouvernements de confirmer que les générateurs de vapeur
25 nucléaires usés sont des déchets radioactifs, car on les a

1 toujours considérés comme des déchets radioactifs et que
2 cela ne doit pas changer;

3 4. et enfin, que nous insistons auprès de
4 ces autorités pour qu'elles déclarent que les déchets
5 radioactifs et les équipements contaminés par la
6 radioactivité provenant du démantèlement, de la réfection
7 ou de l'exploitation courante de réacteurs nucléaires, ne
8 soient pas autorisés à transiter par les Grands Lacs et le
9 fleuve Saint-Laurent ou le long de leurs rives."

10 À ce jour, nous avons reçu 30 résolutions
11 municipales et une résolution d'une MRC qui représentent
12 un total de 104 212 citoyens. Nous espérons pouvoir
13 recevoir de multiples autres résolutions d'ici quelques
14 semaines que nous enverrons à la Commission pour ajouter
15 au dossier.

16 J'ai une question. La loi fédérale est-
17 elle -- a-t-elle priorité en matière de transport maritime
18 et terrestre?

19 Merci pour votre bonne attention.

20 **LE PRÉSIDENT:** Merci beaucoup pour
21 l'intervention.

22 Alors, des questions? Monsieur Harvey?

23 **MEMBRE HARVEY:** Ma première question,
24 Monsieur Giroul, quels sont les documents qui ont été
25 transmis aux municipalités?

1 **M. GIROUL:** Je vais vous les lire.

2 **MEMBRE HARVEY:** Bien, je veux dire quelle
3 est la nature des documents qui ont été transmis à toutes
4 ces municipalités? Est-ce que ce sont des documents de la
5 Commission? Est-ce que ce sont des documents provenant
6 d'autres organismes?

7 **M. GIROUL:** C'est la résolution que je
8 viens de lire, la carte du parcours maritime et terrestre,
9 aller-retour, la liste des 184 municipalités plus
10 spécifiquement concernées selon nos recherches, une photo
11 des générateurs-dérapeurs radioactifs et la liste des
12 signataires en date du 4 août 2010. C'est ça qu'ils ont
13 reçu comme information.

14 **MEMBRE HARVEY:** Donc, ils ont reçu aucun
15 document qui aurait été préparé par le personnel de la
16 Commission ou par Bruce?

17 **M. GIROUL:** Non, du tout.

18 **MEMBRE HARVEY:** Du tout. Donc, comment la
19 Commission devrait considérer -- parce que les gens ont
20 signé mais il me semble que tous ces gens-là, qui ont
21 signé dans une période relativement courte, ont pas tous
22 les tenants et tous les aboutissants du projet.

23 Est-ce que c'est un peu une sorte de lettre
24 circulaire et que les gens l'ont signée sans avoir toute
25 l'information pertinente?

1 **M. GIROUL:** Ils ne pouvaient pas avoir
2 toute l'information pertinente étant donné que ces
3 conseils municipaux-là n'ont pas les compétences pour
4 analyser tout ça. Et on n'a pas eu de demandes
5 spécifiques là-dessus et si nécessaire, on pourra leur
6 envoyer.

7 **MEMBRE HARVEY:** Alors, comment nous de la
8 Commission devrions-nous interpréter toutes ces signatures
9 si ces gens-là ont pas reçu l'information pertinente?

10 **M. GIROUL:** C'est pour vous ---

11 **MEMBRE HARVEY:** Monsieur Giroul?

12 **M. GIROUL:** C'est pour vous signaler que,
13 au Québec, il y a un fort mouvement qui se dessine pour
14 refuser ce genre de transport au Québec. Et c'est appuyé
15 par des résolutions municipales. Les conseils municipaux
16 ainsi que les citoyens qui participaient à ces conseils
17 municipaux-là ont été informés là-dessus et sont de plus
18 en plus éveillés. Et l'audience actuelle permettra
19 vraisemblablement de donner plus d'information.

20 Et nous allons leur -- nous allons informer
21 les 30 municipalités qui ont adopté cette résolution-là de
22 même que les législatures, on va les informer que les --
23 toutes les informations dont vous parlez sont accessibles
24 par -- avec le site de la CCSN. Et ils pourront aller les
25 consulter.

1 **LE PRÉSIDENT:** Je m'excuse. Étant donné
2 que cette résolution était préparée par monsieur Gordon
3 Edwards, est-ce que ça fait partie de la campagne de
4 Monsieur Edwards?

5 **M. GIROUL:** J'ai pas compris. Est-ce que
6 c'était fait par?

7 **LE PRÉSIDENT:** J'ai remarqué qu'il y a --
8 que cette résolution était préparée par Monsieur Edwards.

9 **M. GIROUL:** En collaboration avec notre
10 mouvement également, oui.

11 **LE PRÉSIDENT:** Alors, ça fait partie de sa
12 campagne, n'est-ce pas, contre les nucléaires?

13 **M. GIROUL:** Oui, exactement, oui.

14 **LE PRÉSIDENT:** Alors c'est rien à faire
15 avec ces dossiers ici qui sont maintenant ici devant nous
16 aujourd'hui?

17 **M. GIROUL:** Je sais pas si ça rien à faire
18 là. On vous signale qu'il y a une trentaine de
19 municipalités qui refusent de faire passer ça par leurs
20 territoires.

21 **MEMBRE HARVEY:** C'est-à-dire qui ont signé?
22 Qui ont signé une lettre circulaire, dans le fond?

23 **M. GIROUL:** Non, c'est pas une lettre
24 circulaire. C'est une résolution en bonne et due forme.
25 Nous les avons -- monsieur Gordon Edwards va les déposer

1 en bonne et due forme pour qu'elles fassent partie de ce
2 dossier-là. Et les autres qui vont être reçues, on vous
3 les enverra également. Ce sont des documents officiels
4 d'une municipalité.

5 **MEMBRE HARVEY:** Alors, c'est très bien. On
6 vous remercie.

7 **M. GIROUL:** J'ai pas eu la réponse sur la
8 loi fédérale. Va-t-elle -- est-elle prioritaire en
9 matière de transport maritime et terrestre?

10 **MEMBRE HARVEY:** D'abord, je voudrais vous
11 souligner que les contenants qui vont revenir vont être
12 dans des contenants approuvés, des contenants qui peuvent
13 à l'heure actuelle même passer soit par la voie ferrée,
14 soit par les camions dans vos municipalités.

15 C'est lorsque les matières sont à
16 l'intérieur de contenants désignés, bien y a pas à passer
17 même par la Commission pour donner l'autorisation. Les
18 matières sont automatiquement transportées d'un endroit à
19 l'autre sans qu'il y ait besoin de permis.

20 Donc, c'est possible que déjà, dans vos
21 municipalités, sur les routes de vos municipalités, des
22 déchets similaires, de même nature, sont déjà sur la
23 route.

24 C'est de l'information que je vous donne en
25 passant là.

1 **M. GIROUL:** Avec les autorisations du
2 Ministère des transports du Québec ou bien du Ministère
3 des transports Canada?

4 **MEMBRE HARVEY:** Ah, bien, ils ont tous les
5 -- bien, je pourrais demander peut-être au personnel de la
6 Commission de vous répondre.

7 **M. GIROUL:** D'accord, on va attendre votre
8 réponse. Merci.

9 **M. SAUMURE:** Denis Saumure, Service
10 juridique de la Commission.

11 Tout d'abord, je vais juste souligner que,
12 au niveau de la réglementation du secteur nucléaire, il a
13 été reconnu que c'est de juridiction fédérale. Ceci
14 n'exclut pas qu'il peut exister -- qu'il existe d'autres
15 pouvoirs soit au niveau provincial, municipal, et cetera,
16 qui peuvent s'appliquer à certaines des activités
17 rattachées aux activités nucléaires ou afférentes.

18 C'est seulement dans le cas où on ne peut
19 pas appliquer ces diverses réglementations de façon
20 concomitante qu'à ce moment-là que la doctrine de la
21 primauté de la loi fédérale va s'appliquer.

22 **M. GIROUL:** Merci.

23 **LE PRÉSIDENT:** Docteur Barriault, votre
24 question?

25 **MEMBRE BARRIAULT:** La question que je

1 voulais demander c'est que, y ont signé cette résolution-
2 là sans avoir l'information de ce qui en est du transfert
3 que Bruce Power propose. Alors, c'est une décision non
4 informée que vous me dites?

5 **M. GIROUL:** Non. Ils ont lu la résolution
6 et cette résolution-là comporte suffisamment d'éléments
7 pour qu'ils prennent une décision de signer. Il y en a
8 qui l'ont refusée n'étant pas suffisamment compétents;
9 d'autres on dit « Nous, on est assez compétents avec le
10 libellé de cette résolution-là et nous la signons. »

11 **MEMBRE BARRIAULT:** C'est tout. Merci.

12 **LE PRÉSIDENT:** Merci beaucoup pour cette
13 intervention.

14 We are going to take now, believe it or
15 not, a 10-minute break.

16 **DR. EDWARDS:** I would like to add something
17 please?

18 **THE CHAIRMAN:** A very quick one.

19 **DR. EDWARDS:** Okay. The resolution that
20 is being referred to was one that was prepared in English
21 and circulated in English by the Great Lakes United Task
22 Force of which I am a member and it was circulated in the
23 United States mostly and in Canada in English, of course.

24 At a certain point, I was asked by some of
25 my Quebec colleagues if they could have a version in

1 consultations with the groups that were around the Bruce
2 Power Plant and we did respond to groups that had wrote
3 in, including the 40 members of the UOI, but we did not
4 directly contact the Akwesasne.

5 **MEMBER GRAHAM:** Will both parties make an
6 effort to meet with the Mohawk Council of Akwesasne to
7 make sure that they're kept informed?

8 I mean, they have presented a brief so they
9 must be aware and be concerned. So I'm wondering will
10 both Bruce Power and staff make another effort.

11 **MR. JAMMAL:** For the record, Ramzi Jammal
12 from CNSC staff.

13 Respective, yes, we will make another
14 effort at least to inform them and establish
15 communication.

16 **THE CHAIRMAN:** Thank you.

17 **MR. LEBLANC:** A written submission from
18 Philippa Lawson, H19.72.

19

20 **10-H19.72**

21 **Written submission from**

22 **Philippa Lawson**

23

24 **MR. LEBLANC:** A written submission from
25 Morgan Lindsey, H19.74

