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Chair

Mr. Leon Benoit

Standing Committee on Natural Resources

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● (1530)

[*English*]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good afternoon, everyone. Welcome.

We are here today pursuant to Standing Order 108(2) to commence the study on the activities of Atomic Energy of Canada Limited at Chalk River.

There are two parts to our meeting today. From 3:30 to 4:30, we have, from the Canadian Nuclear Safety Commission, Michael Binder, president. With him is Patsy Thompson.

Welcome to both of you.

Before we get started with your presentation, we have Mr. Cullen on a point of order.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): Thank you, Mr. Chair.

It's just a small thing. On particular days like today, when we have an issue that we suspect is going to have some public interest, we should either have a different room to use—we move rooms occasionally—or at least set up a table to accommodate the media. It makes it difficult for us to do the work. I know there are other times in the scheduling that you do through your office. It's just a note. It seems like this day is going to get some attention, and a different space would have been appropriate.

The Chair: Your point is well taken, Mr. Cullen. We understand that there aren't enough spots for media with the translation feeds. In the future, we will really try to accommodate them better.

Mr. Nathan Cullen: Thank you.

The Chair: Thank you very much for bringing that up.

If we could, now we'll just go ahead with a 10-minute presentation.

Mr. Binder, please.

Dr. Michael Binder (President, Canadian Nuclear Safety Commission): Thank you, Mr. Chairman and members of the committee.

[*Translation*]

I am pleased to be here today to discuss nuclear regulation in Canada and the mandate of the Canadian Nuclear Safety Commission.

[*English*]

I've prepared short opening remarks. I understand they've been distributed.

Accompanying me this afternoon is Dr. Patsy Thompson, our director general of environmental and radiation protection and assessment.

[*Translation*]

Mr. Chairman, I would like to start by explaining the role and responsibilities of the Canadian Nuclear Safety Commission.

[*English*]

Simply stated, the CNSC is Canada's nuclear watchdog. We regulate nuclear facilities and activities in Canada. We regulate nuclear power plants, uranium mines, waste management, nuclear medicine, and small devices.

Our core mission is to protect the health, safety, and security of the public and our environment, and to respect Canada's international commitments on the peaceful use of nuclear energy.

[*Translation*]

We are governed by the Nuclear Safety and Control Act (NSCA), which clearly sets the objects, roles and powers of the Commission.

[*English*]

One of our fundamental operational principles is to conduct our regulatory work in an open and transparent way. We routinely hold public hearings to license major facilities and to discuss significant developments that affect our policies, regulations, and our stakeholders.

We held 28 such public hearings and meetings in 2008. We heard from 260 intervenors and made 37 licensing and 13 environmental assessment decisions. In fact, just last week, in a public hearing here in Ottawa, the commission heard an update from CNSC and AECL staff on the recent leaks at the NRU.

We webcast our public hearings. Everyone can see and hear the proceedings. To get a real feel of how open and interactive our hearings are, I invite you and other honourable members of Parliament to tune in to future hearings or to look at our recent proceedings, which are stored on our website at www.nuclearsafety.gc.ca. We want to make sure that the work of the CNSC is accessible, interactive, known, and understood.

To make sure that our nuclear safety mandate is carried out, we have developed a rigorous regulatory oversight framework. Our Canadian safety standards are benchmarked against international standards.

We rely on the work of the International Atomic Energy Agency, the IAEA, and other eminent groups of doctors and nuclear experts, such as the United Nations Scientific Committee on the Effects of Atomic Radiation and the International Commission on Radiological Protection, as well as Health Canada and Environment Canada. We rely on these organizations to develop and advance the science that takes into account health and environmental effects in nuclear management.

● (1535)

[*Translation*]

We take these international and domestic standards and incorporate them into licensing requirements that our licensees must meet.

[*English*]

And then we go further. When it comes to safety considerations we expect more from our licensee than these standards. Indeed our licence conditions for all nuclear sites include reporting and action levels that are far more stringent than the international standards. These reporting and action levels require licensees to identify and report to us any significant event as soon as possible so that action can be taken long before there is potential impact on human and environmental health.

We set these very demanding reporting requirements or thresholds to ensure the safety of Canadians and the environment. Setting an effective regulatory framework is important. However, one has to make sure that the rules and regulations are being complied with. We require licensees to monitor, measure, and report periodically on operations, performance, and releases to the environment to ensure that this approach works. To ensure this is being done, we also have on-site staff at all major nuclear facilities in Canada who monitor and oversee nuclear safety on a daily basis.

Given that we deemed the December leak at the NRU to be of low safety significance, we were caught by surprise at the level of interest the events generated. As requested by the Minister of Natural Resources, reports by CNSC and AECL on those events were tabled in Parliament. The reports explain that AECL acted appropriately in its reporting to the CNSC. There was no cover-up; there were no risks to health, safety, or the environment from these events.

[*Translation*]

We have distributed a handout for you this afternoon, which portrays the actual releases against regulatory limits.

[*English*]

I would be willing to take you through those handouts.

We have recognized that we, both the industry and the regulator, can improve communication on all our activities, and we are acting to meet these expectations. As you may be aware, there was another small leak of heavy water at the NRU this past weekend. AECL notified the CNSC of the leak on Sunday morning, and AECL exercised its voluntary reporting obligations and provided information on its website yesterday. We also updated our website. The lessons learned from the December event are being implemented.

Like the other event in December, the leak had no impact on the safe operation of the NRU, and it posed no risk to the health and safety of the public, workers, or the environment.

[*Translation*]

In closing, I want to note that Parliament legislated the basis for a solid and clear nuclear safety regulatory framework. That framework is based on international and domestic standards and best practices.

[*English*]

Canadian nuclear facilities are safe. Otherwise we wouldn't license them to operate. Our regulatory framework makes safety our number one priority. We do not compromise on safety; it is in our DNA.

Thank you. *Merci beaucoup.*

The Chair: Thank you very much.

A point of order, Mr. Regan.

Hon. Geoff Regan (Halifax West, Lib.): On a point of order, Mr. Chairman, I was surprised that you have these groups divided into two different hours—the Canadian Nuclear Safety Commission for an hour and the AECL and Canadian Nuclear Association for the next hour.

These groups are all here. Couldn't we hear from the other two groups for their 10-minute presentations and then have them all available for questions? Certainly that was my intention when I suggested this study to the committee. Why would you not do that?

● (1540)

The Chair: Mr. Anderson, on a point of order.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): The agenda was turned out days ago. Mr. Regan could have raised this with us at that point; he chose not to. I think we should stay with what we have here.

The Chair: We won't change the agenda. The agenda has been out since Thursday of last week.

We have this group before us now. We'll go forward with the questioning, and in the second hour we have the other two groups.

Mr. Cullen.

Mr. Nathan Cullen: That is appreciated. I suppose in the moment we have in front of us, committees are able to be masters. If the witnesses are here and available, I don't see why there would be any reason to be against such an idea. It allows the discussion. Because these groups are so interconnected on this issue, it just seems to make more sense to have it that way. I don't see why not.

I understand the procedures of committees and this was issued, but if we are here now and the space is available and witnesses are ready to go, why not? I think it will allow committee members a better ability to question the witnesses to find out how this communication was or was not going on, which is essentially the point of this exercise. It seems it will be very disjointed to have one set of testimony, where there will be allusions to what AECL or the other players in the game are doing, and then to hear from them an hour later and have answers in the second hour that we'd prefer to ask the witnesses in the first hour.

I don't know why committee members, particularly on the government side, can't agree to this. The opposition is showing willingness to amend the agenda and have it done this way.

If the witnesses are here and this leads to a better committee hearing, I don't see why not.

The Chair: What's better or not is a matter of opinion, but, again, the agenda was out. I know we're all busy, but it is important to have your staff look at the agenda. If you had brought to my attention that there was a different wish on the part of committee, we could have tried to deal with it.

Hon. Geoff Regan: Mr. Chairman, you're saying that had we contacted you on this you would have changed it—for future reference, just so we can have this clear for the future.

The Chair: Sure. We certainly would have discussed it, and yes, if that were the will of the committee, absolutely.

Mr. Bains.

Hon. Navdeep Bains (Mississauga—Brampton South, Lib.): We are having that discussion right now, Mr. Chair. Even though, yes, this was not brought to your attention a few days earlier, the argument is being made that these are interconnected. It makes a lot of sense. Sometimes if you pose a question to one group of witnesses, they might allude to the other group, and that might cause a difficulty for us to get the answers we're looking for.

In the spirit of cooperation, that's what we're asking for. We understand that the agenda was put forward before, but it is a very reasonable request to ask all the witnesses to speak at one time and we'd get a collective opportunity to ask questions. That is a very fair request, and I would ask you to reconsider, please.

The Chair: Again, the agenda has been out. I can't adjust the agenda now.

The witnesses have come believing and understanding how the arrangement would work, when they would present, who else would or wouldn't be at the table, and to change that now is a problem.

Mr. Anderson.

Mr. David Anderson: We're using up valuable time here. We could be well into our first round of questions, and we're going to certainly use up more time on this issue if the opposition insists on going through with this. So why don't we just get to our questioning?

The Chair: We will go ahead.

Mr. Regan, you were first up, for seven minutes.

In future, though, certainly bring that to my attention, the clerk's attention, or the attention of the committee, and we will deal with it, but let's get on with the valuable time we have here today.

Hon. Geoff Regan: Thank you, Mr. Chairman.

Mr. Binder, perhaps you are aware of a report today in which Ms. Linda Keene has indicated there were conversations she had had. She had two phone calls from Minister Lunn at the time of the isotope crisis in December 2007. In the first call he said he was looking for solutions, and in the second call he ordered her to allow the facility to reopen. Were you aware of those calls or a party to them, or do you know someone else who was a party to those calls?

Dr. Michael Binder: I wasn't there. I was in a different life, different job, minding my own business. I wasn't aware of any of this until January 2008.

Hon. Geoff Regan: If you had a call from a minister tomorrow directing you to do something, directing you to allow an NRU shutdown to reopen after you had ordered it closed, how would that be different from the Minister of Immigration calling the Immigration and Refugee Board and ordering them to let someone into the country who they hadn't agreed to let in?

● (1545)

Dr. Michael Binder: I have been in this job for a bit more than a year. I have spoken to the minister. I've never been asked to do anything of the sort, and I really wouldn't want to comment on a hypothetical situation.

Hon. Geoff Regan: Well, in fact, it appears it is not hypothetical. It has happened before and there is a concern that it may happen again. Therefore, what would you do if you were called by a minister and directed to do something contrary to what you had decided?

Dr. Michael Binder: That's not the way we operate. Our commission is a very regulatory, if you like, quasi-judicial body, and the actual decision we take in writing—of being published, tabled—is the only decision that's valid. As a president of the commission, even if I wanted to do something, I couldn't do it without the commission going through due process.

Hon. Geoff Regan: So it doesn't bother you that your predecessor was called and ordered by the minister responsible to change her decision?

Dr. Michael Binder: I wasn't there, so I really wouldn't like to comment on something that happened before my time.

Hon. Geoff Regan: Can you tell me how many times AECL has appeared before the commission since June 2008? Perhaps if you can't, do you have someone else with you who can?

Dr. Michael Binder: I think they were there about three times, if my memory serves me right. The most recent was last week, I think February 19, to bring us an update on the so-called leak that happened in December.

Hon. Geoff Regan: What other subjects have there been at appearances by AECL before the commission since June 2008?

Dr. Michael Binder: Again, I hate to rely on memory here, but—

Hon. Geoff Regan: That's why I'm suggesting you may wish to rely on an official or someone else with you who's perhaps been there longer than you have.

You're entitled to do that at these meetings.

The Chair: Go ahead, Dr. Thompson.

Dr. Patsy Thompson (Director General, Directorate of Environmental and Radiation Protection and Assessment, Canadian Nuclear Safety Commission): Mr. Chair, my understanding is that there were two other commission proceedings related to the AECL Chalk River site. One was on an environmental assessment being conducted by the CNSC for the Chalk River site and the other one was on a licence amendment.

Hon. Geoff Regan: Why did it take more than a month for the public to be informed of the December 5th leak at Chalk River?

Dr. Michael Binder: I would like to set the record straight on this. As I said in my opening remarks, we were very surprised at the level of interest. Our offices knew about the leak almost instantly. If memory serves me, the leak happened December 5 and our office was informed December 6. Both organizations deemed the leak to be of such a small magnitude as not to be significant, kind of a routine operational issue that we did not at the time deem it to be worthy, if you like, of reporting to the public. It was all contained in the facilities.

There is a particular rigorous international protocol for when you alert the public. It is a regime from zero to seven, with zero meaning there is really no impact on the environment or on the public. We had decided at the time that this was of no interest to the public.

Obviously, because of the interest, we decided to review our procedures here. We are now in the process of reviewing those procedures, and in the future we will report more on things that we deemed in the past to be routine.

Hon. Geoff Regan: Even though a little more than a year ago we had a crisis in Canada that was widely publicized and discussed in the media and here in Ottawa, and even though the government fired your predecessor, you were surprised at the interest in these leaks. That astonishes me.

Dr. Michael Binder: It was because a leak was found, it was resolved, the NRU restarted, there were no problems, and the isotope production started again. As far as we were concerned, there was nothing to report.

Hon. Geoff Regan: Has the leak that occurred this past Sunday been corrected? The report yesterday indicated that there was a section of a 2.5-inch-diameter pipe that was the source of the leak. My question is, has that been repaired?

Dr. Michael Binder: My understanding is that it has been isolated and managed in that sense, but I don't know if they actually went and soldered the leak.

● (1550)

Hon. Geoff Regan: They're collecting the heavy water that's spilling out of the pipe.

Dr. Michael Binder: Right.

Hon. Geoff Regan: How many years beyond 2011 do you think the NRU reactor could be used to ensure a reliable supply of medical isotopes?

Dr. Michael Binder: That would be the subject of the proceedings in 2011. As you know, Mr. Chairman, we and AECL have agreed that there should be no surprises in 2011 on what kind of information the commission will need to make an intelligent, informed decision about whether the licence should be extended and for how long. In fact, we've agreed on what the information is that we are looking for. We are in the process now of getting the process going so that in 2011, in a public hearing with all due process, all the information will be tabled, a hearing will be conducted, interveners will have a chance to argue and debate, and then we will take a decision. I'm unable to tell you right now what the outcome of this hearing in 2011 might be.

The Chair: Thank you, Mr. Regan.

Now, for up to seven minutes, Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Good afternoon, sir.

You told us about two mandates that your commission has. Now, these look to me like two opposite mandates. Your first mandate consists in ensuring public and environmental health. Your deputy minister, Serge Dupont, even told us, regarding this matter, that there had been insufficient public information and that this had to be improved. It is good to hear you tell us that you will be doing that.

Your other mandate consists in supplying isotopes to the medical world. The recent breakdown in Chalk River provoked a big crisis in the medical world. How do you reconcile these mandates? Have you really learned something from your past problems? What are the major changes that you have made?

Dr. Michael Binder: My mandate is very clear. It is written in the legislation. I do not agree with saying that we have two mandates. There is only one mandate: it is public and environmental safety. When making a decision, all the factors must be taken into account. Isotope production is one of these factors, as is environmental safety. The mandate is aimed at ensuring the safety of our operations.

Ms. Paule Brunelle: Canada supplies between 50% and 70% of all the isotopes supplied worldwide. We know how important these are for patients. I think I understood—and correct me if I am wrong—that according to your mandate, you are not responsible for ensuring a steady supply of isotopes to physicians and to hospitals under fully secured conditions, obviously.

Dr. Michael Binder: You are right: that is not my mission. It only consists in ensuring that our operations are...

Ms. Paule Brunelle: That they are entirely safe?

Dr. Michael Binder: That's right.

● (1555)

Ms. Paule Brunelle: Ms. Keen told us that she was concerned about the political independence of your organization. She said that the nuclear industry should be safe and reliable, and we both agree about that. Nevertheless, doesn't the fact that you have to supply isotopes on a worldwide basis put heavy pressure on you? We saw the crisis that arose from this. Parliament had to intervene in order to resolve it. Do you not think that there was a connection with both these mandates?

Dr. Michael Binder: I entirely agree in saying that decisions are hard to make. If they were easy, we would not need a commission. The commission's role really consists in considering all the relevant factors. Environmental impact is also a very difficult issue. We have to measure all the risk factors and make a decision. It is not easy, but it is our mandate.

Ms. Paule Brunelle: You say that you are the watchdog, and I am glad to hear you say that. We, of the Bloc Québécois, are very fond of calling ourselves a watch dog for Quebeckers. I really understand what that means. Do you feel free to do your work as a watch dog? is there no political interference and do you have sufficient freedom to make your decisions?

Dr. Michael Binder: I have been a public servant for 37 years, and I am entirely convinced that I am fully independent. It is very difficult to try and influence a commission in its work.

Ms. Paule Brunelle: You told us that there was a leak last Sunday. Regarding this, you told us such leaks were of little interest, and that you were surprised at the level of interest they had provoked among the public. Now, I am the MP for Trois-Rivières and I also live in the neighbourhood of a nuclear plant. We even keep iodine pills at home along with a list of safety measures. I understand that this issue can attract the interest of the public and of the media. The nuclear sector is a very complicated one.

Do you not think that further steps should be taken, that simpler and more adequate information should be provided? When some people who have been associated with your organization cast doubt on your transparency, should you not take further steps to reassure the public? Please reassure me.

Dr. Michael Binder: I entirely agree. One of my challenges was to improve the information provided on our site. We will try to make it easier to understand. Nuclear science is a very complex subject, and people are afraid of such operations. Consequently, these things must be explained to them. We have a very good track record. We operate in a very...

Ms. Paule Brunelle: Safe manner?

Dr. Michael Binder: Yes, thank you. And that has been the case for quite a few years. However, we must improve the information provided on our website.

Ms. Paule Brunelle: Have you changed any specific parts of your operating methods or do the changes have to do only with your website? I imagine that if I were you, I would have taken the bull by the horns...

Dr. Michael Binder: Therefore, I will try—

Ms. Paule Brunelle: ...and I would have decided to make some substantial changes, because people are very worried.

Dr. Michael Binder: The information needs to be simplified, and it is not an easy thing to do. We have always attempted to explain the figures. In this case, we tried to explain the events. I do not know if we succeeded. It is up to you to tell us whether we succeeded or not.

[*English*]

The Chair: Merci, Madame Brunelle.

Mr. Cullen, for up to seven minutes, please.

Go ahead.

Mr. Nathan Cullen: Thank you, Chair.

Thank you to our witnesses for being here.

I'm surprised that you're surprised, sir, that there was this much public interest. I'm finding it hard to reconcile the history of this particular reactor over the last 18 months. I'm reading a press release from AECL just after the leak in early December. They're talking about a regularly scheduled outage, and they talk about unanticipated technical challenges.

Is that an industry term for a leak, a spill?

Dr. Michael Binder: You'd have to ask them.

Mr. Nathan Cullen: I mean from your knowledge—you have extensive knowledge in this field.

● (1600)

Dr. Michael Binder: Not necessarily.

I don't know if you have ever visited that site or any other nuclear plant. I must tell you, the first time I visited it was only about nine months ago. What surprised me is the size—the magnitude and complexity. There are literally miles of pipes, of switches. There are all kinds of glitches that can go wrong or that can trip a machine. It could be any one of those technical issues.

Mr. Nathan Cullen: But during this particular moment at the site, there was a leak.

Dr. Michael Binder: Right.

Mr. Nathan Cullen: The reactor, in fact, had been shut down earlier than scheduled to compensate for that leak. But the Canadian public was told about “unanticipated technical challenges”.

I will pose this question to AECL. I was trying to get some understanding from you, as an expert in the field, if that is somehow code or translates into a serious problem. While you may suggest that the site is big and there are miles of pipe, the funny thing about nuclear waste is that it doesn't take much to affect an environment, and it doesn't take much to alert the public.

Is it leaking right now?

Dr. Michael Binder: Not to my knowledge.

Mr. Nathan Cullen: Not to your knowledge. There was a leak reported this morning that happened over the weekend.

Dr. Michael Binder: On Sunday a leak was detected. We were informed on Sunday of the leak.

Mr. Nathan Cullen: So that leak has been repaired?

Dr. Michael Binder: Right.

Mr. Nathan Cullen: The leak from early December that was suggested in a submission in early February—

The Chair: On a point of order, Mr. Regan.

Hon. Geoff Regan: Mr. Binder told me that it was not repaired yet, that it was simply being collected—

The Chair: Mr. Regan, that's a point of debate.

Mr. Cullen, continue, please. You will have that time added on so you get your full seven minutes.

Mr. Nathan Cullen: Thank you, Chair.

So we have three leaks. There was an ongoing leak that was reported by Mr. Akin on January 27. There was a leak in early December. There was a leak just this past weekend, and I'm a little unclear as to whether the leak is still going on.

There are 47 kilograms of heavy water that have been released from this site. Do you consider that a problem?

Dr. Michael Binder: If memory serves me right, there are something like 65 tonnes of heavy water in this particular facility. This is on the same order of magnitude as if you had a leak in your faucet at home—you know, drip, drip, drip.

Mr. Nathan Cullen: But if the leak from that faucet had nuclear material in it, I wouldn't consider it just a small problem.

Dr. Michael Binder: But that's what we do. We determine the magnitude of the leak and we determine its safety consideration before we consider it to be of significance.

And by the way, as an aside, if you look at our chart, we have a regulatory limit, the maximum allowed in a spill, and then we have an action level, where we mean when that happens you had better come and tell us very quickly, and then the operator is at the administrative level, where some action can now be taken.

Mr. Nathan Cullen: If a water spill is under 10 kilograms, does AECL report to you?

Dr. Michael Binder: At 10 kilograms, they have the discretion whether to report to us or not.

Mr. Nathan Cullen: Here's the funny thing. In the cumulative effect of all these leaks, can this not be a death by a thousand cuts, that small leak after small leak after small leak speaks to the public as a significant problem?

Now the question of communication comes forward as to what's being reported and what's not. Sometimes a small leak, as you're suggesting, was reported just this past weekend. In December we had a press release with admittedly obscure language suggesting some sort of technical problem. What is the safety level, in terms of the amount of becquerels allowed per litre of water in Canada? Do you know?

Dr. Michael Binder: Yes. The maximum allowed is 7,000.

Mr. Nathan Cullen: Why does California have a level of 15?

Dr. Michael Binder: Here's where we get into what is a standard. It was an objective and is the kind of objective you want to achieve.

And maybe Dr. Thompson can give a more fulsome reply to that particular aspect.

Dr. Patsy Thompson: Mr. Chair, member of Parliament, the State of California has a legally enforceable drinking water standard for tritium of 740 becquerels per litre. That's the same as other U.S. states. The 15 becquerels per litre is not an enforceable standard; it's what is being referred to—

Mr. Nathan Cullen: Sorry, can I get the number again?

Dr. Patsy Thompson: It's 740.

Mr. Nathan Cullen: So 740 to 7,000, which is Canada's limit.

Dr. Patsy Thompson: That's correct.

Mr. Nathan Cullen: That's an extraordinary difference, isn't it, in what we determined? Throughout the testimony we've talked about what is safe and not being worried about public concern. The fact that Canada has a limit, 7,000, should give one caution that maybe we should be reporting absolutely everything.

Dr. Patsy Thompson: Okay.

Mr. Nathan Cullen: Maybe our system here is too permissive about what the public is exposed to.

Dr. Patsy Thompson: To put things in perspective, of all the nuclear facilities operating in Canada, nuclear power plants, the Chalk River site, the level of tritium in drinking water supplies has always been below 20, and in most cases it is below 15. So although the guideline or the standard is 7,000, the regulatory regime that CNSC has put in place to manage releases of tritium to the environment has been very protective of public drinking water supplies. The levels of tritium in public drinking supplies are below 20 in all cases.

Mr. Nathan Cullen: You talked about yourselves as the watchdog, right—and you seem to take your jobs very seriously. The confidence from the public to be able to know that the information they're actually getting from such a sensitive place as a nuclear reactor of any kind does not bode well for the industry overall. As you are well aware, the industry is incredibly sensitive to public opinion because they handle some of the most dangerous material known to humankind. I'm finding these ongoing leaks make it very difficult for me to go back to my constituents and say they aren't to worry, these leaks are all being reported, the cumulative effect is being understood, and that 47 kilograms of heavy water is not a problem.

● (1605)

Dr. Michael Binder: I just want to add that we've already acknowledged we can report better and we acknowledge we can do a better job of explaining what's going on. The one thing I need to emphasize is that there's a difference between something inside the facility and what is happening in the environment. We impose on the licensees, they have to measure and report the impacts on the environment, and that's really the trigger when we get really concerned.

So if you actually get into Ottawa measurements on the impact on the Ottawa water concentration, on air, on land, etc., those are the things we really should explain better.

We tried in this chart of water. Even after the spill you can see that the level of measurable tritium in the Ottawa River was way, way, way below the California standard.

The Chair: Thank you, Mr. Cullen.

Now to the government side, to Mr. Hiebert, for up to seven minutes.

Mr. Russ Hiebert (South Surrey—White Rock—Cloverdale, CPC): Thank you, Mr. Chair.

Mr. Binder, the question we have is the question that Canadians want answered, and that is, to what degree is there a risk to the public or the environment?

On a number of occasions you've said in your report that there was low safety significance. So you didn't choose to mention the events that happened in December. Then later you mentioned there was no risk to health and safety or the environment. And then speaking of what happened just this past weekend, you again said there was no risk to the health and safety of the public, the workers, or the environment.

I want to unpack that a little bit. What do you mean when you say that the level of risk to the public was low or of no significance, or that there was no risk to the public?

Dr. Michael Binder: In any industrial project, from petroleum to coal mines, you name it, there are what are known as "planned emissions". In our business it is controlled, it is monitored, it is measured. In other words, we set the boundary of what is acceptable in the operation.

These boundaries are set by the international scientific and medical community. It's the health community that tells us what is an appropriate level; it is not us. We adopt these, we put them in place and we impose them, and then we add some more safety factors to them.

For example, the real or true impact on the health of the public and the environment is yet another measure, and it's called millisievert. If the allowable health impact is one millisievert, all of our standard behaviour is that as long as you are below that level, there are very low risks to health.

I don't know, Dr. Thompson, if you want to add to that.

All our operations in Canada are based on this particular health-related standard.

Mr. Russ Hiebert: In the chart you provided to us, it states that the regulatory limit is one millisievert, which is the safe level below which you want to have operations maintained. On the same graph, you also indicate that the maximum potential exposure from the recent events was 2/10,000 of one millisievert. For those of us who aren't technical, can you explain the difference between one millisievert and 2/10,000? On the scale of a swimming pool, how much are we talking about in terms of 2/10,000 of one millisievert?

● (1610)

Dr. Michael Binder: I don't know how to explain a 2/10,000 percentage more strictly. It's minuscule, that's all I can say. And it has no impact. There is no known empirical health evidence of an impact of that concentration on the health of human beings, animals, air, you name it.

Mr. Russ Hiebert: And that's why you've stated categorically that there was no risk to the public, there was no risk to the people who live near the Ottawa River or work near the Ottawa River, because it was so minuscule.

Dr. Michael Binder: Correct.

Mr. Russ Hiebert: All right.

Now, there has been some question as to when this was reported. Could you unpack the process that AECL and CNSC have in their reporting mechanism for these kinds of things?

Dr. Michael Binder: Well, the moment something happens.... First of all, everybody should know that there are all kinds of bells and whistles and triggers and indicators measuring things that might happen. If something gets triggered, operators go in and try to find out what's wrong.

If they suspect, let's say, a leak, as happened on December 5, they go in. We have staff on site; we are on top of the operators like a wet blanket. We monitor what they do. The operator there phones our desk inspector, if you like, and informs him the very next day that something is going down. And our people go in there and together they observe what's going on.

If they break a particular threshold—in this particular case, 10 kilograms of heavy water leaked—they absolutely have to submit a formal written report to us. That report is filled out, and if it's deemed to be significant, the licensee has to appear in front of the commission in a public hearing to explain the significance of the event. This is public and people can intervene and comment, etc.

So the problem has been that the two sides have decided that something is insignificant because of the relatively minuscule amount of water. We've agreed that we can do better. Since they report to us, we might as well report to everybody that it has happened—and we are looking into improving our reporting requirements.

Mr. Russ Hiebert: So are you telling us that in the past these sorts of incidents were not reported because they were considered so minuscule, so insignificant?

Dr. Michael Binder: The minuscule and the small incidents were not reported. But for significant incidents, for example, a trip, or if our Pickering nuclear plant shut down, they have to come to us and explain why.

Mr. Russ Hiebert: Right. But in terms of the leaks that we have been referring to, they were of such small significance that under the previous standards that you had voluntarily adopted, they were not worthwhile reporting—

Dr. Michael Binder: To the public.

Mr. Russ Hiebert: —to the public, but you've gone above and beyond the expectations or the requirements of the law to provide that additional information even though it's insignificant.

Is there not a risk here of creating some unnecessary concern by the public in reporting these insignificant leaks?

Dr. Michael Binder: Well, that's the other side. In fact, we have some advisory committees who keep telling us, "Don't tell us all the routine stuff. We're not interested in the routine stuff." So you get caught as to what it is that you report. And we are working with the industry now as to what would make sense. Every time we say there is a leak, people don't believe that all of a sudden everything stops and....

And by the way, as an aside, regarding the leak last weekend, on Sunday, my understanding is that the machine was not shut down. It happened somewhere outside the core, and the production of isotopes continued.

So here your point is well taken. What is the balance? What should we report to the public without raising unnecessary angst?

Mr. Russ Hiebert: Just briefly, my colleague from the opposition raised the question of becquerels per litre and he said that California's limit was 740. Dr. Thompson said that our limit has never exceeded 20. Is this a safe standard?

Dr. Patsy Thompson: Mr. Chair and members of Parliament, the standard that Canada has adopted, the 7,000 becquerels per litre, is based on recommendations from the World Health Organization. It is a safe standard. The dose associated with this level of tritium in drinking water.... If someone were to drink 7,000 becquerels per litre every day for a full year, it would not result in a health risk that would be measurable. This is a level deemed safe by the World Health Organization, which has been adopted by Canada.

● (1615)

Mr. Russ Hiebert: But you said the measurements were at 20.

Dr. Patsy Thompson: That's right, so the CNSC does not use 7,000 as its limit for regulating the industry. The regulatory framework is based on the public dose limit but also on action levels and administrative levels, and the requirement for operators to take all reasonable precautions to operate and maintain their plants well. In the history of the CNSC, facilities we regulate have released tritium into the environment, but in drinking water supplies we have rarely seen levels of tritium above the 10 to 15 range. There are some levels at 17, but usually—

Mr. Russ Hiebert: So we're well below that.

The Chair: Mr. Hiebert, your time is up.

Now we will go to Mr. McGuinty of the official opposition for up to five minutes.

Mr. David McGuinty (Ottawa South, Lib.): Thank you, Mr. Chairman.

Thank you very much for joining us today, Dr. Thompson and Mr. Binder.

Mr. Binder, I want to go back to your comments about being surprised. You said you were surprised about the interest in what you called a so-called leak, and then you called it a leak. Do you think it's wrong for Canadians to be surprised or interested in the fact that the reactor that supplies more than half of the world's medical isotopes is leaking?

Dr. Michael Binder: Obviously now, as we've admitted, Canadians want to know. We will gladly share with them more information.

What was surprising, again, is that the leak was inside the machine. None of this went outside to the river, etc., and that's why we took a decision not to go public with this. And by the way, as an aside, a couple of weeks later it would be reported to the advisory committee, the AECL heads there, as part of their procedures.

Mr. David McGuinty: Mr. Binder, on December 10, 2007, the government registered an order in council, which was only published and made public for the Canadian people on December 26, the day after Christmas 2007, splitting or in fact giving your Canadian Nuclear Safety Commission a dual mandate. On the one hand, you're in the business of nuclear safety, and now, on the other hand, to read from the order in council, you must take into account "the health of Canadians who, for medical purposes, depend on nuclear substances produced by nuclear reactors".

There was no debate about this, no tabling of legislation, nothing in the House of Commons, nothing at this committee.

Last night, Linda Keen, on cbc.ca, the CBC's website, is quoted as saying at 11 p.m., through her first interview since her firing by the former minister, that she feared for the safety of Canadians for two reasons, one because in the second phone call she got from Minister Gary Lunn she was ordered to restart the NRU. She was ordered to start it up even though, acting within the four corners of the statute that empowers your commission, her advice was that this was unsafe.

The second reason she gave was that Canadians should fear nuclear safety in this country because of the dual mandate that you must now execute on, given to you by the Government of Canada or the Conservative government with no consultation, no parliamentary debate, no committee debate, which now compels you, as Canada's top nuclear safety regulator, to balance the production of medical isotopes with nuclear safety.

First, is she wrong? Secondly, is there another nuclear safety commission anywhere in the world with this dual mandate?

Dr. Michael Binder: With all due respect, I'm not a lawyer, but I know that section 19 of our act gave the government the authority to direct the commission. I also know, because our lawyer is telling us, that you cannot legislate by direction. In other words, any new mandate imposed on the commission would have to have gone through a formal legislative change, not through a direction. What that means is that we do not have two mandates.

I'd like to be very clear: we do not have two mandates; we have one mandate. If you think we're not going to shut down a facility that is unsafe, I think you are making a mistake.

Mr. David McGuinty: Mr. Binder—

● (1620)

Dr. Michael Binder: We've just ordered a couple of licensees, one that I don't know if you're familiar with, the Mackenzie plant, which was in trouble.... We drew an order about removing some material. We will not hesitate to take action if a facility is unsafe.

Mr. David McGuinty: Mr. Binder, let me ask you this, then. If you don't have a dual mandate, why did the government, by order in council in December 2007, published the day after Christmas, give you a second mandate?

Dr. Michael Binder: What has happened—and again, I wasn't there, so I'm just telling you what I would do. You have to weigh risks. We have to weigh risk on the impact on the environment. When a proponent comes to us and wants to open up a new mine, we have to weigh the risk of the impact on the environment, the impact on native communities, and so on, in making a decision.

Mr. David McGuinty: I understand that, sir, but now your risk management has been fettered by directive of the crown.

The Chair: We'll go now to Mr. Shory from the government side.

Mr. Devinder Shory (Calgary Northeast, CPC): Thank you, Mr. Chair, and I'd also like to thank the departmental officials for coming here this afternoon. I'll be sharing my time with my colleague, Cheryl Gallant.

Mr. Binder, as I am a new member on the committee, to have a better understanding I want to know, what is heavy water and what is light water?

Secondly, in the past, at one time, reports suggested that radioactive water was flowing unchecked into the Ottawa River. Can you please explain the treatment process, if there was any?

Dr. Michael Binder: Heavy water is when deuterium and hydrogen get together and there is another neutron in hydrogen. It is naturally occurring. I don't remember what the percentage is, maybe 10% heavier than normal water. It's a natural kind of element. It's used to moderate, by which I mean to control, the nuclear reaction in a nuclear plant. That's the value of this heavy water. By itself, it's not radioactive. It is a naturally occurring thing. It's when a neutron is getting bombarded in this water that creates some of the radioactive elements.

Sorry, what was the second question you had?

Mr. Devinder Shory: My second question was that reports at one time suggested that radioactive water is flowing unchecked into the Ottawa River. Was there any treatment process undertaken?

Dr. Michael Binder: All facilities have a place where they collect the radioactive material and many other materials—there are all kinds of other materials. Some of them get treated; some get measured and controlled in terms of release to the outside world; some of them are stored in permanent facilities. So how you treat the material depends on what the components of the material are. But whatever goes outside the plant is measured and controlled. It always has to be within the allowable health level that we impose on the licensee.

Mr. Devinder Shory: Thank you.

The Chair: Ms. Gallant, go ahead.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Mr. Binder, you said that heavy water is not radioactive. What about toxicity? How much deuterium would have to get into the Ottawa River for somebody to suffer toxic effects? How many gallons would they have to drink?

Dr. Michael Binder: It's not toxic at all. It's plain water. In fact, it will never happen because it's very expensive. I don't think anyone would just allow heavy water to flow into the water, because in fact you're reprocessing and trying to recover as much of the heavy water as you can so that you can put it back into the nuclear core.

It's not toxic.

Mrs. Cheryl Gallant: So it's not to a company's benefit to let any of that go. It's valuable for use in the reactor.

What about tritium? Does it occur naturally?

Dr. Michael Binder: Tritium occurs naturally as a result of cosmic radiation, if you like. We have a chart here. If you look at the first chart, it shows that the natural background radiation for all Canadians is 2.4 millisievert. There are all kinds of nuclides in the atmosphere, and they're called background radiation. And if you look at the levels, the regulatory limits, that we impose on licensees, you'll see they're well below the background radiation.

● (1625)

Mrs. Cheryl Gallant: How would it compare to having a chest X-ray, the amount of allowable radioactivity that is emitted?

Dr. Michael Binder: If you look at this chart you'll see that we actually put this on. Every time you undertake a medical process, it's around 1.2 millisievert, whereas the regulatory level is 1.0 millisievert over a year. So our standard for those operating facilities is lower than what you'd get from some medical X-rays.

Mrs. Cheryl Gallant: So then background radioactivity is even greater than an X-ray.

It's getting to the point, though, where the different companies are required to report emissions that are less than the background radiation that's occurring naturally.

Dr. Michael Binder: Correct.

Mrs. Cheryl Gallant: You mentioned it was contained in that particular leak on December 5. So there wasn't any radioactivity that was allowed to go into the river?

Dr. Michael Binder: It goes into our waste facility and it's measured. All the material goes into one facility. Some of it goes into permanent storage, some of it is controlled and measured as they release it to the Ottawa River. There's always some sort of ongoing release well below the health limits we impose.

The Chair: Thank you, Ms. Gallant. Your time is up.

For about two or three minutes, Madame Bonsant.

[*Translation*]

Ms. France Bonsant (Compton—Stanstead, BQ): Thank you, Mr. Chairman.

Mr. Binder, I must tell you that I am really totally ignorant about nuclear things, but I am not the only one. People still remember Chernobyl and the impact that it had. You tell us that you are informing the public through the Internet, but let us not forget that some regions of Canada do not have the Internet. People do not naturally by instinct consult the Internet to find out what is going on. I think that you should establish a better mode of communication to inform the people about the problems you are facing. In fact, these things are worrisome only to those who know nothing about nuclear physics.

You say that there is no contradiction between protecting public health and ensuring a supply of isotopes, and that these are merely factors that need to be considered in making decisions. As you said, the previous departmental directive did not include the management of isotopes. Therefore, is it not right to say that your position is more sensitive than your predecessor's position was?

Dr. Michael Binder: Every leader manages things as he must. As far as I am concerned, it is always difficult to analyze and to measure all the risks before deciding on what to do.

If the reactor is not safe, we will shut it down. However, if we can attenuate the risks, we can try to find other ways to carry on operations in a safe manner.

Ms. France Bonsant: Have you developed a new grid for analyzing the risks?

Dr. Michael Binder: An expert is working with AECL on finding ways to attenuate the risks.

Ms. France Bonsant: Attenuate?

Dr. Patsy Thompson: It means to decrease.

Ms. France Bonsant: All right. As I said, I am not a great fan of nuclear power. This is not my area of expertise.

Do I have a little time left, Mr. Chairman?

[*English*]

The Chair: You can have one more question if you'd like, yes.

[*Translation*]

Ms. France Bonsant: Recently, there were three leaks. Were they considered accidents? Even though these were minor leaks, have you noticed an increase in the number of such accidents?

The NRU reactor is more than 50 years old; it is older than I am. Do you think that there will be further accidents in Chalk River?

Dr. Michael Binder: Everyone is saying that they are old machines. It is like a car: if you change the tires, the motor and all the rest—

● (1630)

Ms. France Bonsant: It is still an old heap nonetheless.

Dr. Michael Binder: We always try to replace the old parts of the reactor. In fact, 75% of this reactor is new.

Ms. France Bonsant: You are comparing a nuclear reactor to a car. We may well put new tires on a 35-year-old car, but that will not prevent it from rusting.

Dr. Michael Binder: We are trying to update the old nuclear plants. We could extend the lives of these plants by taking measures and by rebuilding—

[*English*]

I'm not saying it right.

When you really refurbish, for example, Bruce Power and Point Lepreau, it's almost like building a brand-new nuclear plant. We put in new safety, new standards, new things in an old machine. In other words, we restructure the whole thing, and the number one priority for us is safety. In fact, when we put the new material in there it is according to a new standard of safety that is developed internationally.

So one can argue that the machine now will be running in a more safe state than before.

The Chair: Merci, Madame Bonsant.

Thank you very much, Mr. Binder.

Yes, Mr. Anderson, just for a minute.

Mr. David Anderson: Sorry to interrupt you, Mr. Chairman. I'm just wondering if the witnesses have extra copies of this. Perhaps the media would be interested. If they don't, we'll try to get some for them or get some duplicated for them if they need them.

The Chair: Were they distributed to the committee? There are extras at the back.

Thank you very much, Mr. Anderson. They certainly can be distributed to the media.

Thank you very much, Mr. Binder and Dr. Thompson for coming today. I appreciate it very much.

We will suspend the committee now for two minutes. If the witnesses could clear the table as quickly as possible and if the next witnesses from Atomic Energy of Canada Limited and the Canadian Nuclear Association could find their places at the table, we will reconvene in two minutes.

● (Pause) ●

● (1635)

The Chair: Order, please.

We will resume the meeting now with our witnesses. From Atomic Energy of Canada Limited, we have Hugh MacDiarmid, president and chief executive officer—thank you very much for being here—Bill Pilkington, senior vice-president and chief nuclear officer, and Michael Ingram, senior vice-president, operations.

Thank you, gentlemen.

From the Canadian Nuclear Association, we have Murray Elston, president and chief executive officer.

Thank you, Mr. Elston, for coming this afternoon.

I understand that Mr. MacDiarmid will be making a presentation on behalf of Atomic Energy of Canada.

Mr. Elston, you don't have prepared notes; you may have a very short statement to make. I understand, Mr. Elston, that you have to leave by about five o'clock or shortly after.

Mr. Murray Elston (President and Chief Executive Officer, Canadian Nuclear Association): I'll stay a little longer.

The Chair: That is, a little longer than five o'clock.

Any committee members wanting to question Mr. Elston, please keep in mind that it will have to be done in the first round.

Go ahead, please, Mr. MacDiarmid, with your presentation.

Mr. Hugh MacDiarmid (President and Chief Executive Officer, Atomic Energy of Canada Limited): Mr. Chairman, thank you very much.

[*Translation*]

Thank you for inviting us to speak to you about Atomic Energy of Canada today.

I am accompanied by Mr. Bill Pilkington, Senior Vice-President of Research and Technology, and Chief Nuclear Officer. His responsibilities as a manager include the operation of the installations in Chalk River. Mr. Michael Ingram, Senior Vice-President of Operations of the CANDU Division, is also here. He is specifically in charge of a refurbishment of the plants, like those at Bruce and Pointe Lepreau.

[*English*]

Before taking any questions, I would like to provide an overview of AECL's mandate and to review two issues that have recently been the subject of comment.

AECL has a dual mandate from Parliament. The first is to build a global commercial enterprise—

[*Translation*]

Ms. France Bonsant: A point of order, Mr. Chairman.

[*English*]

The Chair: We have a point of order.

Madame Bonsant, go ahead.

[*Translation*]

Ms. France Bonsant: Mr. MacDiarmid's notes are not bilingual. They are half in French and half in English. Could we have a copy in French?

Excuse me, sir, I just got the right copy.

[*English*]

The Chair: Okay, I think we have that sorted out.

Please continue, Mr. MacDiarmid.

Mr. Hugh MacDiarmid: As I said, AECL has a dual mandate from Parliament. The first is to build a global commercial enterprise that designs, constructs, and services nuclear reactors. This business is based in Mississauga, Ontario. AECL's CANDU technology is a proven supplier of safe, clean energy to millions of people, here in Canada and in countries around the world.

The second mandate is to operate a national laboratory for nuclear science, which is located in Chalk River. This has led to the development of a world-class research and development program supporting both our CANDU fleet and the Canadian research and academic communities, as well as, most topically, our isotope production function.

On the topic of isotopes, there are five reactors in the world that produce the bulk of them. Typically, the Chalk River reactor has delivered approximately one-third of global isotope production. Last summer, the largest of the other four reactors, located in the Netherlands, was forced to shut down, and it is only now restarting. To make up the supply shortfall, AECL increased its production and has been supplying over half the global demand.

It bears mentioning that average Canadian requirements are roughly 10% of AECL's production levels. The vast majority of our production is for non-Canadian consumption.

Ensuring reliable supplies of isotopes and other essential R and D requires investment. The majority of the incremental $351 million that is being requested for the upcoming fiscal year applies to the program to upgrade our Chalk River laboratories, including improvements to the reliability of isotope supply.

We are very mindful of the need to acquire the CNSC licence renewal for the NRU by October 2011, and we're working very closely with the CNSC to that end.

That brings me to concerns that have been raised about leaks at Chalk River. I refer, honourable members, to reports on the subject from AECL and the CNSC that were tabled in the House by the Minister of Natural Resources. I want to emphasize that these reports clearly show that the public was never at risk whatsoever and that AECL strictly followed all established procedures.

I would also like to comment briefly on the provision in the 2008-09 supplementary estimates (C) for $100 million to continue ongoing life-extension work on two key reactors. AECL's ability to provide reactor life extensions is fundamental to CANDU's competitiveness. There's the potential to undertake 20 such life extensions over the next 15 years. The two life-extension projects currently under way at Bruce and Point Lepreau are very different in nature from each other. Both of them are first of a kind in their own right.

Unfortunately, the schedule has slipped, and unbudgeted cost increases have occurred. But these life-extension projects are not simply tightening a few bolts and applying a fresh coat of paint. It's a complex task to deconstruct and then reconstruct a nuclear reactor. In some respects, it's more complicated than building a new one.

We have put in place intense scrutiny and oversight procedures. We have made changes as necessary and are benefiting from lessons learned. We have assembled experienced, capable, and committed teams of professionals at both locations to deliver on our undertakings. While doing this, we will, of course, not compromise workplace safety.

● (1640)

[*Translation*]

Once the projects are finished, for 25 more years, our clients will have reactors that can produce electricity in a reliable manner and with few emissions. More than 50% of the energy used in Ontario comes from nuclear plants, and in New Brunswick and Prince Edward Island, the percentage is 30%.

[*English*]

To conclude, yes, there are challenges. As AECL has done for over 50 years, these challenges will be met and overcome. Beyond the challenge is a remarkable once-in-a-lifetime opportunity for this country. Global demand for electricity will double in the next 30 years. Demand for nuclear reactors is growing rapidly. This is a $2 trillion opportunity. AECL's history, its products, its Canadian partners, and above all its remarkable employees place Canada in a unique position to create an industry for the 21st century that will provide thousands of high-paying jobs. It is this opportunity that is foremost in our goals at AECL.

Thank you, Mr. Chairman.

The Chair: Thank you, Mr. MacDiarmid, for keeping your comments very brief.

Mr. Elston, do you have any comments to make?

Mr. Murray Elston: Yes, if I might.

● (1645)

The Chair: Go ahead.

Mr. Murray Elston: Thank you very much.

First of all, thank you for inviting me. I do apologize for not having prepared remarks. I have circulated some highlight information from our 2008 handbook. The 2009 one is now being prepared. We have publications on our website. We also have hard-copy publications, including *World Energy*, in both French and English. Both versions are available on our website, but there are some hard copies available as well.

The reason we're a little bit pressed for preparation time these days is that we have our annual conference coming up Wednesday. I thank the Parliament of Canada for permitting me a brief advertisement. Of course, members have been invited to attend our sessions.

You can see, just by the profile of speakers, that we are addressing broadly the interests of the nuclear industry. It's a $6.6-billion-per-year industry in this country. We have a tremendous record of exports. In fact, when we looked at the results generated by the sale of two CANDU 6 reactors externally, for instance, we saw that there was a $5.973 billion hit on the GDP. So it is in fact a very prosperous opportunity, as has been outlined by Mr. MacDiarmid.

I can tell you that we in the Canadian Nuclear Association are thankful for the efforts being taken to ensure that we remain competitive. I would say, for instance, that as Canadians across this country look at developing the new and innovative industries that will carry us forward, they ought not forget about the nuclear industry, which is already at the head of many areas in the development of nuclear technology worldwide. Competitively it gives us a very big and prosperous opportunity internationally. I was pleased to see the investments brought forward in the budget along those lines.

I have all kinds of other information available for people who would like to check the website, but right now, with those brief remarks, I'm available to answer a few questions and go forward from there.

The Chair: Thank you very much, Mr. Elston.

We will start the seven-minute round with Mr. Regan from the official opposition.

Go ahead, please.

Hon. Geoff Regan: Thank you very much, Mr. Chairman.

I'd like to thank you all for coming this afternoon.

Mr. Elston, I can assure you that brevity is not something of which the people around here, including us, are often accused. None of us are likely to complain about any of the brief remarks we heard today from both of you. We appreciate your brevity; it allows us to get to the period of questions and answers.

Mr. MacDiarmid, in relation to the recent leak on Sunday, has the pipe referred to in yesterday's status report been repaired?

Mr. Hugh MacDiarmid: I'm going to refer to Mr. Pilkington. He is the chief nuclear officer and is responsible for the site.

The Chair: Mr. Pilkington, go ahead, please.

Mr. Bill Pilkington (Senior Vice-President and Chief Nuclear Officer, Atomic Energy of Canada Limited): Mr. Chair, the simple answer is that a temporary repair has been done. The section of piping that had a leak, which amounted to two small pinholes, was physically isolated by closing valves to take it out of service and stop the leak. Late yesterday a temporary patch was put over it to assure no leakage until a proper repair can be done.

Hon. Geoff Regan: Would that be during the next stoppage? Or would you require a stoppage to do a proper repair?

Mr. Bill Pilkington: In the case of this piece of piping, we haven't made a decision on whether we would do the repair within a scheduled maintenance outage or whether we would do the repair online. It isn't urgent to put that equipment back in service. We have duplicate equipment.

Hon. Geoff Regan: In relation to the heavy water that leaked on December 5—I gather it was treated—how much tritium was in the water that was released into the Ottawa River post-treatment?

Mr. Bill Pilkington: I don't actually have a number for that water.

I might clarify, from the previous line of questioning, that 47 kilograms of heavy water leaked in December. Of that, a total of 4.5 kilograms evaporated, was released through the NRU stack, and was monitored and recorded. About 14 kilograms of the higher-concentration water was recovered.

Hon. Geoff Regan: I was just focusing on the one question in terms of what went into the river. I think you've given the best answer that you can. Is that—

The Chair: Mr. Regan, just let him finish. I think he was close to finished.

Hon. Geoff Regan: Mr. Chairman, it's my time, as you know, and I have other questions I'd like to ask if you don't mind. I think he's answered the question and I appreciate his answer to the question, but I would like to go on to other questions. I have one for Mr. MacDiarmid.

The Chair: Go ahead, Mr. Regan.

Hon. Geoff Regan: It's in relation to the fact that the Province of Ontario has said that it wants assurance that the Government of Canada will remain the ultimate backer of AECL in its bidding for reactors. Do you know what the government's plans are for AECL? And if not, how can you develop a strategic plan without knowing that?

Mr. Hugh MacDiarmid: Every indication that I've been given is that the Government of Canada is fully supportive of AECL, both in its plans to promote our new reactor technology and to go forward to be a globally competitive supplier.

● (1650)

Hon. Geoff Regan: That's in the present configuration?

Mr. Hugh MacDiarmid: That's not my decision to make. I really need to defer to government officials to respond to what directions they plan.

Hon. Geoff Regan: But if they privatize part of it, how can they then be the ultimate backer?

Mr. Hugh MacDiarmid: I can't really respond to that question.

Hon. Geoff Regan: It's hypothetical, fair enough.

Don't you find it strange that there hasn't been a clearer signal from the same government that fired Linda Keen, in view of the circumstances?

Mr. Hugh MacDiarmid: A clearer signal of...?

Hon. Geoff Regan: Well, a government that took an action like that in relation to nuclear energy.... It was very clear in its views on that, but it hasn't given any clarification, in my view, on where it's going. We had the minister saying here that a report that was done in August in terms of where AECL should be going hasn't been given to her to read yet.

Mr. Hugh MacDiarmid: Sir, I simply can't comment on that because I'm not privy to that information. I simply respond to, if you will, the signals I get through the chain of command that is in operation. And my signal today is that the Government of Canada has committed to the budgetary support to allow us to continue development of our ACR-1000 reactor. We believe that is an essential ingredient in our ability to put in a serious bid for the Ontario nuclear—

Hon. Geoff Regan: And have you been asked to advise the minister on where AECL should go and how they should deal with AECL in terms of these questions?

Mr. Hugh MacDiarmid: No, I have not been asked to give formal advice to the minister on that matter.

Hon. Geoff Regan: Okay.

You've talked a bit about the kind of funding that you've gotten this year. Back in 2007-08, you were receiving $103 million, and then over this current fiscal year and the next one you'll have close to a billion dollars. On page 180 of the budget, it says the minister is reviewing AECL's structure, and this review will consider options that include private sector participation in the commercial operations of the corporation. Is it your view that the government, by waiting to announce whether we'll sell or keep AECL, has created uncertainty that's actually working against the corporation? That's particularly in relation to bids like Ontario's, but there are certainly well more than a hundred projects being looked at and being bid on around the world. What does it do to AECL in relation to all of that?

Mr. Hugh MacDiarmid: Frankly, I think the most important thing to occur here, by far, is for the right decision to be made, whatever that may be. I can tell you that I am perfectly comfortable continuing to operate and lead the enterprise in its current structure, and I see no impediments whatsoever to being able to continue to build our global franchise.

Hon. Geoff Regan: Mr. Chairman, if I have time left—

The Chair: Thirty seconds.

Hon. Geoff Regan: —I'll hand it over to my colleague, Mr. Tonks.

The Chair: One very short question, Mr. Tonks.

He has more time later.

Mr. Alan Tonks (York South—Weston, Lib.): I'm not sure where to start.

I appreciate that there are still representatives here from CNSC. There is now a framework that has been agreed to with respect to the kinds of incidents that occurred. From your perspective, what is in that joint communication that was different from any reporting procedure that you had before?

Mr. Hugh MacDiarmid: We undertook in the report that was tabled in Parliament to voluntarily adopt a different, and you could say lower, threshold of reporting in the sense that we believe we were fully in compliance with the reporting obligations and expectations that were in place at the time of the December incident. But the level of interest that's been shown since that point in time has clearly indicated that we should rethink that, so we are working together to come up with a different protocol.

I wouldn't say that we have absolutely dotted the i's and crossed the t's yet. But there's a commitment, and we've registered the sincere desire to respond to the transparency wishes of Canadians.

The Chair: Thank you.

Mr. Tonks.

Mr. Alan Tonks: On a point of order, Mr. Chairman, you'll recall that at the last meeting, from our hearings that we had with respect to the last bill, we had a protocol that had been developed.

Would it be in order for me, simply on behalf of the committee, to request that when that protocol has been enunciated between CNSC and Atomic Energy of Canada it be made available to the committee?

The Chair: Certainly.

A voice: The MOU.

Mr. Alan Tonks: Yes, the memorandum of understanding.

● (1655)

The Chair: Okay.

You've heard the request, Mr. MacDiarmid?

Mr. Hugh MacDiarmid: Yes, sir.

The Chair: Thank you. We will look for that.

Mr. Alan Tonks: Thank you.

The Chair: Now we'll go to the Bloc Québécois and Madame Brunelle, for up to seven minutes.

[*Translation*]

Ms. Paule Brunelle: Good afternoon, gentlemen. Thank you for coming.

Mr. MacDiarmid, I hope that I am pronouncing your name correctly.

Mr. Hugh MacDiarmid: You are pronouncing it very well.

Ms. Paule Brunelle: Earlier, you heard my conversation with the representative from the CNSC about ensuring a steady supply of medical isotopes, which is a matter that concerns me. Here is what you said in your presentation:

> The majority of the incremental $351 million that is being requested for the upcoming fiscal year applies to the program to upgrade our Chalk River laboratories—including improvements to the reliability of isotopes supply.

How will you go about this? You had to stop developing the MAPLE reactors. Now, how will you ensure a sufficient supply of medical isotopes for the public?

Mr. Hugh MacDiarmid: I am sorry, but it is easier for me to answer in English.

Ms. Paule Brunelle: That is fine.

[*English*]

Mr. Hugh MacDiarmid: When all is said and done, I believe, we are looking to ensure that the NRU reactor is fully capable of producing isotopes beyond its licence renewal date of October 2011. We have done a very significant amount of detailed evaluation to understand what is necessary for us to achieve that.

We have also entered into a protocol with the CNSC with respect to the management of that regulatory review process so that there are no surprises at the end of the road. As part of that, we've identified a number of areas we need to invest in, in the reactor and in the various ancillary support infrastructure, to ensure we do that. It's our intention to move forward with that program. Included in the $351 million is, indeed, roughly $47 million that is dedicated specifically to what we call the isotope supply reliability program.

[*Translation*]

Ms. Paule Brunelle: Finally, you are mainly intending to repair them. Have you thought of buying a reactor from abroad or of any other possibility?

[*English*]

Mr. Hugh MacDiarmid: For the repair of the...?

[*Translation*]

Ms. Paule Brunelle: Yes. We note that the reactor is often shut down. It does not seem to be working well. This is why the safety of isotope production is not guaranteed. To say the least, this reactor has aged to the point of maturity.

Are you finally going to refurbish the installations, or are you taking steps to purchase new reactors from abroad, from France or from somewhere else? Is this conceivable?

[*English*]

Mr. Hugh MacDiarmid: We believe the most cost-effective solution for isotope production continuity is extending the life of the NRU. In fact, it is the only really practical alternative available to us, given the licence renewal timing of 2011.

The long-term solution is one that has yet to be decided in any serious way. Anything is conceivable, but right now we believe that the NRU, because of the robustness of that design, does provide us with the most cost-effective solution to provide reliable isotope production within the foreseeable future.

[*Translation*]

Ms. Paule Brunelle: Perhaps you will find my next question strange. From Quebec's point of view, given that hydro-electric power in Quebec is more important than nuclear power, we are wondering whether we really need to build so many new nuclear plants in Canada. Should we not develop parallel programs to promote energy efficiency and to move toward other energy sources? It seems to me that Canada is investing large sums of public money in nuclear energy.

[*English*]

Mr. Hugh MacDiarmid: The energy policy extends well beyond my domain, but as a part of the overall puzzle, I'm certainly happy to comment.

We believe that diversity is appropriate in your energy supply mix —you should not become overly dependent on any one mode—and therefore we see nuclear as being complementary to many other technologies and other ways of generating electricity. We also support any and all programs that will reduce consumption, because their use simply reduces the amount of capacity that must be put in place.

Having said that, I'm clearly a proponent of nuclear. I believe that nuclear should play an equally large and likely a larger role in the future supply mix, because it is emissions-friendly, it is reliable, it is safe, and it is economical. We are of the view that nuclear has a role to play, and a bigger one.

● (1700)

[*Translation*]

Ms. Paule Brunelle: Some people have doubts about safety. This is why we are here today to try to get some answers.

I have one final question. I read in the newspapers that some people were raising questions about uranium reserves. What can you tell us about these reserves, both in Canada and elsewhere in the world?

[*English*]

Mr. Hugh MacDiarmid: We are blessed with one of the largest uranium supplies in the world, and it's a great national asset for us. We can look to it to provide us with security of supply for many years to come. At the same time, to the extent that the global demand for uranium grows as quickly as many forecast it will, it's certainly possible that uranium will come to be in shorter supply. That, of course, will be wonderful news for the Saskatchewan uranium industry, because their prices will likely go up.

At the same time, we at Atomic Energy feel that our technology should be flexible and should accommodate a number of different scenarios of future fuel supply. One of the great strengths, frankly, of the CANDU design is that it has fuel flexibility to burn alternative fissile elements, such as thorium, or to burn recovered uranium, so that we're part of lessening the creation of nuclear wastes and of creating more economic power generation using CANDU. We're certainly part of the program that will in effect keep our options open and will be able to take full advantage of the strengths we have in Canada in uranium, but also provide for the day when globally uranium is perhaps a scarcer commodity.

The Chair: Merci, Madame Brunelle. Your time is up.

But, Mr. Elston, you would like to reply to that as well. Please go ahead.

Mr. Murray Elston: Yes, I have just a brief comment.

First of all, there are a couple of places where uranium exploration and development have grown quite quickly. Canada used to be the largest known reserve area. It has been surpassed by Australia. Australia has taken off moratoria on some of their mining and expansion. At the same time, Kazakhstan both has been opened up to exploration and has seen developments for the finding of uranium. Until about 2011, we will also see the use of MOX fuels from the conversion of Russian military material into civilian fuels. So in the immediate future and for several decades to come, there is no expectation that there will be the kind of shortage that would cause a huge problem for the industry.

Secondly, in the operation of nuclear plants, the fuel costs are a relatively small amount, less than 5% of the overall operating costs, so the impact is also well restricted against the final price going to the consumer. That, of course, is one of the reasons why the development of the ACR-1000, for instance, looks at reducing the consumption of fuel, looks at a reduced machine to produce more energy, and at the end of the day at getting a more competitive electricity price out to the people. We expect, with those types of advances, that we will see an extension of the life expectancy of the reserves.

The other thing that is interesting about uranium is that as the price goes up it becomes more profitable to go into more marginal deposits. Marginal is a relative term, but I can tell you that in Saskatchewan—for instance, at McArthur River—they have 80% pure uranium deposits, which is just a phenomenal resource for Canada. In other places it's not so good, but as the price goes up, you will find more reserves being opened up, more work going on. In fact, in addition to the different fuels that may be used, we have a very long life expectancy ahead of us.

● (1705)

The Chair: Thank you, Mr. Elston.

Mr. Cullen, for up to seven minutes. Go ahead, please.

Mr. Nathan Cullen: Thank you, Chair. Thank you to our witnesses.

I want to get to this question of surprise Mr. Binder expressed. I imagine some of you and your colleagues were surprised by the amount of attention with respect to Chalk River over these last couple of months? Is that accurate?

Mr. Hugh MacDiarmid: I hesitate to dive into the "surprise" word debate, but in a sense, what I would say is our attention at the time the decisions were made with respect to the December announcement, frankly, was focused on the continuity of isotope supply. When we were concentrating our attention on what messages we wanted to send, that was foremost in our mind. So I would say that, consistent with what was said earlier, we treated this matter as one where there was no safety exposure, no risk to the public, and therefore we did not make an explicit comment on that in our press releases.

Mr. Nathan Cullen: Do you feel as if you've gotten some fair treatment in this, then? It seems there's some sort of balance between reporting things when they happen and not alarming the public, as some of my colleagues have suggested.

I guess I'm confused. Okay, so you're focused on isotope supply, that's great, but you're also focused on nuclear safety. You heard me ask this earlier—unanticipated technical challenges. No layperson looking at this issue would have any clue whatsoever; people who study this issue would have no clue that was actually in fact talking about a leak that was going on in the reactor. Is that fair to say?

Mr. Hugh MacDiarmid: Well, it's a choice of words we have to live with because we put it out under our letterhead. It was reflective of the view that this was indeed a routine technical matter. It was indeed a fully contained event and there were no environmental, safety, or other ramifications, and therefore our focus was to say that we had to take the actions we did because of this and move on.

Mr. Nathan Cullen: Just about that fully contained event, five kilograms went into the air, was released.

Mr. Hugh MacDiarmid: Through the venting, up the stack.

Mr. Nathan Cullen: Right. You collected some of the water, treated it, and then released it into the Ottawa River, correct? That's the process.

Mr. Hugh MacDiarmid: Correct.

Mr. Nathan Cullen: Is there tritium still in that water when it's released into the Ottawa River?

Mr. Hugh MacDiarmid: Yes, there is.

Mr. Nathan Cullen: I have to hold you on this one: a contained event, and yet there's tritium going into the air, there's tritium going into the river system because of a leak. There is this balance between reporting everything in these miles of pipes and wires—as Mr. Binder talked about, which sounds very intimidating—and the notion that these leaks are not of concern, that they are using the word "contained" when they're not contained. Do you see where we might have some difficulty with that language and take some exception to the idea that unanticipated technical challenges should be understood by the Canadian public to be a leak?

Mr. Hugh MacDiarmid: I have to say that being involved in that process at the time, when we looked at the materiality and said one one-thousandth of the allowable release limit, we said, "Does this pass the test? Does it merit this kind of treatment?" The choice we made at the time...we can always look back and wish we had done it differently, and clearly—

Mr. Nathan Cullen: Just on that, do you wish you had done it differently?

Mr. Hugh MacDiarmid: The degree of attention that has been paid to this in the past two months would suggest we have been wise in our statement to commit to a lower level of disclosure, a lower threshold for disclosure.

Mr. Nathan Cullen: Which is what happened this weekend. There was another leak. You folks chose to declare, to say this has happened.

Mr. Hugh MacDiarmid: We voluntarily disclosed the information, yes.

Mr. Nathan Cullen: I'm new to this issue and I'm just trying to get more clarity. The MAPLE reactors were in a sense meant to provide up to 100% of the world's need of isotopes. Is that correct?

Mr. Hugh MacDiarmid: One of the project goals of the dedicated isotope facilities was indeed that it would replace the NRU and become the prime supplier of isotopes.

Mr. Nathan Cullen: It was thought of in the 1980s, it began in 1996, was finished in 2000-01, it stumbled along, and then eventually it stopped in 2008. Is that right?

Mr. Hugh MacDiarmid: I won't agree with the "stumbled along", but nonetheless it was before my time.

Mr. Nathan Cullen: But it's no longer.

Mr. Hugh MacDiarmid: It is no longer.

Mr. Nathan Cullen: How much did that cost?

Mr. Hugh MacDiarmid: The total cost to Canadian taxpayers? I believe we took a provision for roughly $250 million in our financial statements last year when we wrote off our investment in that project.

● (1710)

Mr. Nathan Cullen: Over the total life of the project, $250 million is what we sunk into it.

Mr. Hugh MacDiarmid: I'm going from memory, but I believe that's the order of magnitude.

Mr. Nathan Cullen: How much did AECL put in?

Mr. Hugh MacDiarmid: That was our writedown.

Mr. Nathan Cullen: That was all of it?

Mr. Hugh MacDiarmid: That was ours. This was a project that was funded under a joint agreement with ourselves and MDS Nordion, which of course is the subject of some dispute.

Mr. Nathan Cullen: That's in the courts.

Mr. Hugh MacDiarmid: That is correct.

Mr. Nathan Cullen: This year's budget of $351 million is public money going to AECL. Over the 50-year history of AECL, do we have any sense of how much money has flowed from the public?

Mr. Hugh MacDiarmid: I couldn't give you a precise answer to that, but it's certainly more than $1 billion.

Mr. Nathan Cullen: With $350 million in one year, one would imagine over 50.... It hasn't been $350 million every year, but it's been significant.

Mr. Hugh MacDiarmid: Certainly not. The last two years have been very significantly higher than in the previous decade.

Mr. Nathan Cullen: You've had no conversations with government officials at any level about the preparation for AECL for sale.

Mr. Hugh MacDiarmid: I have only been consulted in the most informal of ways. I've not been asked for my advice. And it is indeed a project that is within the purview of the minister and the Department of Natural Resources as opposed to AECL.

Mr. Nathan Cullen: To the tritium question, do you believe it's dangerous?

Mr. Hugh MacDiarmid: Tritium is clearly a substance that needs to be managed, contained, and released in appropriate quantities in a controlled fashion.

Mr. Nathan Cullen: So it's dangerous. It potentially causes cancer and it potentially has harmful effects on humans.

Mr. Hugh MacDiarmid: I will defer to what I heard in the testimony earlier with respect to the danger of tritium. It's a substance that needs to be controlled. I can't personally give you a quantum.

Mr. Nathan Cullen: Does AECL have a policy that says tritium is a dangerous substance?

Mr. Hugh MacDiarmid: We clearly treat it as a substance that is radioactive and needs to be—

Mr. Nathan Cullen: I don't want to assign any language to what "danger" means or not, but you treat it like a dangerous substance.

Mr. Hugh MacDiarmid: We treat it like a radioactive substance.

Mr. Nathan Cullen: Does it bioaccumulate? With exposure, does it sit within the human body and accumulate over time?

Mr. Hugh MacDiarmid: That is a question I'm not personally qualified to answer.

Mr. Nathan Cullen: Does AECL know this?

Mr. Hugh MacDiarmid: I don't know if my chief nuclear officer can answer it, but I can't.

Mr. Bill Pilkington: I would give something of a layman's perspective and note the fact that generally tritium has a relatively short stay time in the human body.

Mr. Nathan Cullen: Do we know this for a fact? I'm assuming. You folks produce this stuff, right? It's considered dangerous in many circles. Over time, people living in the vicinity of a reactor are exposed to higher levels than if they weren't living near a reactor. I'm assuming the agency has some sort of perspective as to whether this thing is dangerous. You'd be opening yourselves to all sorts of litigation. I'm confused by that.

Mr. Bill Pilkington: First of all, I believe you're mixing several items here. Let me start at the back and say that all of our releases are controlled and monitored and they all fall orders of magnitude below regulatory limits. That's the start.

The second piece is that tritium is a radioisotope, it is hazardous, so in the workplace we treat it as a hazardous material. We monitor levels and provide protection for workers if they have to work in environments with significant tritium levels.

The Chair: Thank you, Mr. Cullen. Your time is more than up.

Mr. Allen, you have up to seven minutes, please.

Mr. Mike Allen (Tobique—Mactaquac, CPC): Thank you, Mr. Chair, and I thank you gentlemen for being here today.

For clarification I want to follow that line of questioning we were just on. My understanding, based on the questions that were put to the CNSC and everything before, is that tritium emissions are not new. This happens all the time and it's part of the regular process of the reactor. The leak we're talking about was two pinholes, as Mr. Pilkington said. It was self-contained within the reactor itself and there was no risk whatsoever to humans based on that leak. Is that true?

Mr. Hugh MacDiarmid: That is correct. Maybe the chief nuclear officer, as the executive responsible, should have a say as well.

Mr. Bill Pilkington: Yes, that is correct. You're speaking of the latest leak, which occurred this past weekend.

Mr. Mike Allen: Right, but the tritium levels that are normal have been a normal course of operation at the Chalk River reactor for eons, right?

Mr. Bill Pilkington: Yes, the total amount of tritium that would have been released as a result of the event on the weekend was initially estimated to be about 18 kilograms, and with more refined calculations we determined that it was in the order of 11 kilograms. That's 11 kilograms of heavy water that would have been released through the ventilation system. That was in fact monitored, recorded, and will be reported.

Mr. Mike Allen: Following that, there's also tritium that's released as a normal course without any leaks. Is that correct?

● (1715)

Mr. Bill Pilkington: That's correct. A facility like Chalk River has a low chronic level of tritium release, both through the ventilation system and through the liquid effluents that are treated in our waste treatment centre and released. That is correct.

Mr. Mike Allen: Therefore it is not a new phenomenon.

Mr. MacDiarmid, you said you are very mindful of the need to acquire the CNSC licence renewal in 2011. Your comment was that we need to invest in the reactor and support systems for life extension and that we're two and a half years away from that licensing period coming up. I just want to know if those investments, if you will, in the reactor will be done as part of normal outages. Will they be done as part of normal outages and as part of a project, or how is that going to be done?

Mr. Hugh MacDiarmid: I will turn to Mr. Pilkington to talk about the approach and whether it is outages or not.

Mr. Bill Pilkington: The isotope supply reliability program is a fairly broad program. It involves improvements to equipment and systems and to procedures. It involves long-term planning for succession planning for staffing for the NRU reactor. Currently the majority of the work to implement improvement will be done with the reactor in operation or during normally scheduled maintenance outages.

We do look forward in the future to scheduling, probably on an annual basis, one outage that would be longer in duration for jobs that require a longer shutdown. We would coordinate that with the other reactors in the world that supply medical isotopes so that in fact there is no interruption of supply.

Mr. Mike Allen: Following that, you talked about the two life-extension projects that are going on at Bruce and Lepreau, and that they are very different in nature from each other. Both are first of a kind in their own right.

It's also true that you're also the agent for the upgrade and refurbishment at Wolsong in Korea. Is that not correct? Is that also behind schedule?

Mr. Michael Ingram (Senior Vice-President, Operations, Atomic Energy of Canada Limited): No, it is not.

Mr. Mike Allen: No, it is not. So obviously you are learning something from the lessons-learned exercise, but each one of these is different. Would you expect that when you take the outage at Chalk River there is going to be something different? Because, as you say, it is not just tightening a few bolts and putting a fresh coat of paint on, there is risk in a project like this in taking the outage for isotope supply. Is that not true?

Mr. Bill Pilkington: If I can speak to that, many of the changes that will be made at the NRU reactor and the other isotope production facilities will be done with the NRU in operation. This is actually going to be quite different from the refurbishment of a commercial CANDU reactor in that the work that's being done does not affect the reactor vessel itself or the core materials. It's mainly around support systems.

Mr. Mike Allen: From a risk standpoint, when you look at the Government of Canada from a risk standpoint with AECL, you said you have a market for 20 of these projects, potentially, in the next 15 years. On the challenge of qualifications and making sure you are able to be in the game for these refurbishments, are you learning from these lessons learned? How much difference do you see in some of these projects? Are you going to continue to run into differences, and are you going to have to expand the capabilities in Canada to make sure we have people who are nuclear-qualified to help you do this work?

Mr. Michael Ingram: It is appropriate to say that we'll need to expand the capabilities because we see the tremendous potential for us to play a large role in this.

We certainly are learning lessons as we progress on the projects, and the best way to demonstrate that is to talk about Bruce Power, where our production rates and our ability to refurbish the second reactor are notably better than that of the first reactor we're working on. So we certainly are. We have put in place practices to make sure we are learning our lessons and applying those lessons as we move forward.

The Chair: Mr. Elston, would you like to add to that?

Mr. Murray Elston: Thank you, Mr. Chairman.

I think there are a couple of things that have to be understood as well. The techniques that are being applied to the refurbishment at Lepreau and at Bruce are different because the models they're working on revitalizing are different. But in each case there has been a tremendous amount of research and development and deployment of new technology by the people from AECL.

The work with the new machines, the new mechanisms that reduce the waste and then move it for storage are first-generation types. That same research and development has spawned a number of products that have been used in other sites around the world. We are focusing on single projects at Bruce and at Lepreau, but the research and development undertaken by this company has led to a series of commercial opportunities in other markets.

One, there are lessons learned, for sure; two, there are new pieces of equipment that will be usable at other sites; and three, the development of new people who will work on these refurbishment or revitalization projects is going to be indispensable in providing Canadian know-how around the world as we move on to those 20 reactors.

The other thing is that our industry generally is on the upswing in terms of hiring new women and men through our universities and colleges. That type of capacity that is coming from these refurbishment programs is the type of thing that will provide us with stamina to resist the types of heavy competitive forces we go up against around the world.

You have reflected on the one item, but there are so many other pieces of very good work that are going to provide us with the capacity to have a very robust nuclear industry into the rest of the century.

● (1720)

The Chair: Thank you, Mr. Allen.

We have two people for the final round.

Could you keep your questions to maybe three or four minutes, Mr. Tonks and Mr. Anderson?

Mr. Alan Tonks: To follow up on that excellent line of questioning from Mr. Allen, what is the status with respect to the application for continuation of the NRU reactor? And who has the oversight in terms of your relationship—I suppose to your board—of giving a status report that is definitive and can assuage the concerns of the national and international community that you can meet the ongoing requirement for medical isotopes?

Mr. Hugh MacDiarmid: Thank you for the question. We believe this process is being managed in a very thorough and careful way, with a goal to having the highest probability of the re-licensing application being successful in October of 2011.

We are working very carefully and closely with CNSC staff so that there are clear expectations as to what we must do to satisfy their licensing requirements and to understand that far enough in advance that we can actually do the work in a systematic and thorough way.

As it relates to our own internal governance process, we have both a project risk review committee and a science and technology nuclear oversight committee of our board of directors. I, as the CEO, with Bill, as the chief nuclear officer, and Michael, as the head of operations for our refurbishment projects are collectively accountable to those directors of our corporation. We have very, very thorough and regular reviews.

We do not intend to let any of our regulatory commitments fall by the wayside because of that October 2011 deadline.

Mr. Alan Tonks: Are there public reports? Is there public scrutiny of those reports in some form?

Mr. Hugh MacDiarmid: We go through the mechanisms within our own internal governance process, so we do not typically make those public. Meeting minutes of AECL's board of directors, I believe, are subject to public disclosure.

Mr. Alan Tonks: The dual nature with respect to this accountability regime that you share with us and with CNSC seems to balance two objectives: one is to produce medical isotopes and the other is to guarantee safety to the public.

I have to ask this question. Are you satisfied that the accountability regime is open, transparent, and that it acts in the public interest? And second, is there any other nuclear regime jurisdiction that shares that kind of a mandate?

● (1725)

Mr. Hugh MacDiarmid: Well, I can only really speak to my own side of that mandate, which is clearly that you have the absolute unwaivering commitment from this management team that we are going to operate that reactor safely and that we are also going to do our level best to provide reliable isotope production. In a sense, we don't see those two as contradictory. That's our job and we have to do both. We will not compromise safety in order to meet an isotope production deadline—cannot and would not do that.

So I don't have perhaps the same duality that you referred to with Mr. Binder in his comments, in that we have one goal, which is the safe operation of the reactor, and we also produce the isotopes.

Mr. Alan Tonks: Okay.

Thank you, Mr. Chairman.

The Chair: Thank you, Mr. Tonks.

Mr. Anderson, you have about three minutes.

Mr. David Anderson: I want to thank you for coming out today. I think the best thing or the thing we've gotten the most out of this afternoon is that we've finally brought some realism to this notion that there was some sort of danger, risk to the public, in these incidents. I guess I look for the enthusiastic reporting on the news tonight that that's the case, because Mr. Binder made a very strong case for that and demonstrated that issue. So I thank you for coming, and I wanted to recognize that.

I have a couple of questions, and I want to go back to what Mr. Tonks and Mr. Allen were talking about. We committed about another $100 million to support of refurbishments of CANDUs in the supplementaries. I'm just wondering if you can tell me why the government has to continue to fund those projects. Is that a good investment of taxpayers' dollars, and why is it necessary when most of those utilities are publicly owned already and some are privately owned?

Mr. Hugh MacDiarmid: The simple answer is that we have contractual commitments and we signed agreements with the customers to deliver a certain scope of work in relation to the contract we signed, and we intend to fulfill those commitments.

The point has also been made that the learning, which is occurring in this early stage of the evolution of this line of business for us, sets the stage for an ongoing revenue stream for AECL, which will stretch decades into the future. So we believe we're laying the groundwork for a very successful line of business for our company.

Mr. David Anderson: Well, just as a last question then maybe, I'd like to get some of your ideas about the role of nuclear energy in this economic situation we find ourselves in. We've got an economic downturn. What is your vision for the next few years as things seem to be tightening up economically? What positive role does the development of nuclear energy play in the situation we find ourselves in?

I'd like Mr. Elston to answer that as well.

Mr. Hugh MacDiarmid: I'll be cautious about how far I step into the domain of government policy, but certainly I can see that nuclear power is a very sound infrastructure investment, and it is something that provides clean energy with low emissions, which meets many environmental targets. Clearly, the commencement of a major nuclear project creates thousands of person-years of employment and GDP benefit to the country.

Mr. Murray Elston: There are two very important items. Once a project like the production of electricity from nuclear reactors is given the green light, there are all kinds of people who have to be hired to do the regulatory work, both in front of the CNSC and in terms of environmental assessment, the types of gathering of information, the huge amounts of work that go into that. You can easily see the expenditures of $30 million to $50 million in the lead-up to getting these projects on the go.

We are anticipating in Ontario, obviously, the decisions around Darlington, and already there are people who are at work laying the groundwork for the regulatory compliance, so that we can actually start building plants as we move into the next decade.

So there is an immediacy of employment. There is a spinoff from the types of jobs that are created. There is an uptake in education opportunities in our universities and in our colleges, and there are tax dollars generated from the preparation alone, let alone when we get into the actual new builds. In the refurbishments, we're talking about 1,500 to 1,600 people at the Bruce site, I think, who are working on those revitalization projects, and that alone is quite a boost in the Ontario context.

The Chair: Thank you very much, Mr. Anderson, Parliamentary Secretary to the Minister of Natural Resources, and thank you to Mr. Pilkington, Mr. MacDiarmid, and Mr. Ingram from AECL, and Mr. Elston from the Canadian Nuclear Association. I will see you later on in the week at your conference.

So thank you very much, all of you.

The meeting is adjourned.

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