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Tuesday, February 5, 2008

Chair

Mr. Leon Benoit

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● (1110)

[*English*]

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

Under Standing Order 108(2), we are continuing our study of nuclear safety issues, including safety issues at the Chalk River nuclear reactor.

We have four witnesses before the committee today. We have with us, from the Canadian Coalition for Nuclear Responsibility, Gordon Edwards, president. We have, from Hamilton Health Sciences and St. Joseph's Healthcare Hamilton, Karen Gulenchyn, medical chief, Department of Nuclear Medicine. We have, from Atomic Energy of Canada, Brian McGee, senior vice-president and chief nuclear officer. And we have by videoconference, joining us at noon from the University of British Columbia, Dr. Thomas Perry, Department of Medicine and Department of Anesthesiology, Pharmacology and Therapeutics. He will just come in and give his five- to seven-minute presentation at that time. Because that witness was requested by the New Democratic Party, I'll have the New Democratic member, Ms. Bell, question that witness first. She can, of course, direct her questions to anyone else if she so chooses.

Let's get right to it. There will be five- to seven-minute presentations. I ask the presenters to stick to that. We will follow the order of speakers on the orders of the day, starting with Mr. Gordon Edwards, president, Canadian Coalition for Nuclear Responsibility.

Go ahead, sir.

Mr. Gordon Edwards (President, Canadian Coalition for Nuclear Responsibility): Thank you, Mr. Chairman and members of the committee. I'm pleased to be here. My name is Gordon Edwards, and my background is in mathematics and physics. I've acted as a consultant, part time, on nuclear matters for over 30 years. I have been qualified as an expert on nuclear safety matters by federal courts, royal commissions, and tribunals in both Canada and the United States. I'm a co-founder and am president of the Canadian Coalition for Nuclear Responsibility, a non-governmental organization based in Montreal.

I'm pleased that the parliamentarians on this committee are looking into nuclear issues that ultimately affect all Canadians. I believe that parliamentary accountability of Atomic Energy of Canada Limited should be regularized. Once a year at least, I believe, AECL should be required to appear before a parliamentary committee to update its members on accomplishments and unresolved problems. Had this been the practice, parliamentarians would have had a better context to work with during the isotope crisis. They would have known that AECL was many years behind schedule in bringing the two MAPLE reactors online.

These brand-new isotope production reactors, as you know, were intended to replace the NRU reactor some years ago. It was the intention of AECL to retire the NRU reactor permanently by 2005 at the latest. Although the MAPLE reactors were started up half a dozen years ago, serious defects in construction and design affecting the control rods, the shut-off rods, and the control of the power level have prevented them from performing their intended function—the production of isotopes.

Parliamentarians would also have known that AECL had over two years to perform all the safety upgrades on the 50-year-old NRU reactor, including the task of connecting an emergency power supply to the reactor pumps. AECL had not done this by December 2007, although the CNSC had been told two years earlier that all safety upgrades were completed. In fact, AECL had not even acquired the necessary equipment to carry out the job with a minimum of delay at the next opportunity—i.e., at the next maintenance shutdown.

Meanwhile, the private company, MDS Nordion, did little to alert the medical community or the other suppliers of isotopes that Canada's isotopes supply could suffer an interruption. The MAPLE reactors were way behind schedule and way over budget. Canada's entire supply of medical isotopes was depending upon a geriatric reactor past its retirement date that was not operating according to modern standards of reactor safety, yet no heads-up was apparently given to the other players.

As you know, an article in the *Canadian Medical Association Journal* on Monday charged that the isotope crisis could have been avoided if MDS Nordion had simply cooperated more closely with Europe's two large-scale isotope suppliers, Nuclear Research and Consultancy Group in the Netherlands and the Institut National des Radioéléments in Belgium.

It seems that this private company, MDS Nordion, the only agency that is making a profit from Canada's isotopes business, has managed to escape responsibility for the isotopes crisis in the eyes of the government. In my view, it's a perfect example of “lemon socialism”: the private company takes the profits and the public gets the lemons.

I believe the firing of Linda Keen was unjustified and unwise. In my view, she was just doing her job. It was a classic example of shooting the messenger rather than listening to the message.

The message is that AECL is not functioning as well as it should, and something should be done about that. The message is also that MDS Nordion is not doing its job of ensuring an uninterrupted supply of isotopes for the medical community, nor alerting the medical community properly of possible difficulties.

CCNR has always held that the Canadian Nuclear Safety Commission should not be reporting to Parliament through the Minister of Natural Resources but through another ministry. That way, when a conflict develops between the nuclear regulator and AECL, there would be two voices at the cabinet table instead of just one. The Minister of Natural Resources, who is responsible for AECL, finds himself in a conflict of interest, forced to choose between the developer or the regulator. This is not correct. Unless this situation is rectified by having CNSC report to a different minister, I see little prospect for Canada to have a truly effective, independent nuclear regulatory agency.

It seems clear that the isotope crisis was caused by actions and omissions of AECL and MDS Nordion rather than by CNSC, who merely blew the whistle. Firing Linda Keen will not prevent future shortages of isotopes. The MAPLE reactors may never operate as planned, despite the fact that their cost has soared beyond all expectations.

● (1115)

There is another dark cloud on the horizon, one that all parliamentarians should be concerned about. AECL is still using highly enriched uranium target elements in order to produce molybdenum-99 for sale by MDS Nordion. Highly enriched uranium is an immediately weapons-usable material. Any criminal or terrorist organization obtaining a few kilograms of HEU could make a powerful nuclear explosive device. The presence of such strategic nuclear material at Chalk River explains why the bus that carried journalists to tour the NRU reactor after it restarted had several guards armed with machine guns.

With a change of administration in the United States following the upcoming elections, it is entirely possible that the shipments of this strategic nuclear material from the United States to Canada will be stopped. Thus we may be facing a new isotope crisis in just a few years' time.

There is a U.S. federal law called the Schumer Amendment, which seeks to eliminate all traffic in weapons-usable nuclear materials. Some years ago, the Nuclear Control Institute in Washington, D.C., launched a lawsuit in U.S. Federal Court to prevent any further shipments of highly enriched uranium to Chalk River.

The Chair: Mr. Edwards, you're a little over six minutes, so I would ask that you wrap up very shortly.

Mr. Gordon Edwards: I'm almost finished.

It already has enough highly enriched uranium for two or three atomic bombs. One of the outcomes of that lawsuit is that AECL and MDS Nordion have both promised U.S. authorities that they will work to eliminate the use of HEU as a target material to produce isotopes and convert to non-weapons-usable material instead. This is entirely feasible. For example, Argentina produces all of its molybdenum-99 using low-enriched uranium.

AECL and MDS Nordion have made little progress in this direction. I believe the processing facility that was built in conjunction with the MAPLE reactors is not large enough to accommodate an easy conversion to low-enriched uranium.

To conclude, I believe the CNSC should be reporting to a minister other than the Minister of Natural Resources. I believe AECL should be accountable to Parliament on a regular basis. I believe Parliament should become involved in the question of weapons-usable nuclear materials being used at present or that may be used in the foreseeable future. I also believe Parliament should be involved in the investigation and documentation of the status of the Chalk River site, which is heavily contaminated with radioactive materials of many different kinds, from many different sources, and which constitutes an important undocumented portion of Canada's national debt.

Thank you, Mr. Chairman.

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

We will go now to Karen Gulenchyn from the Hamilton Health Sciences and St. Joseph's Healthcare Hamilton.

Go ahead, please.

Dr. Karen Gulenchyn (Medical Chief, Department of Nuclear Medicine, Hamilton Health Sciences and St. Joseph's Healthcare Hamilton): Thank you, Mr. Chair and committee members, for the opportunity to appear before you today.

As you know, I'm Karen Gulenchyn. I'm a specialist in nuclear medicine and internal medicine, and I've worked in this field since 1979. I'm currently the medical chief of the Department of Nuclear Medicine at Hamilton Health Sciences and at St. Joseph's Healthcare, and I am an associate professor in the departments of radiology and medicine at the Faculty of Health Sciences at McMaster University. I am also a member of the group of experts that was called together last December by the Minister of Health to provide advice on the medical isotope supply.

I thought I'd take a minute to explain nuclear medicine, a specialty I'm very proud to practise. Nuclear medicine is concerned with the use of radioactive materials, which are known as radiopharmaceuticals, for the diagnosis and treatment of a wide number of diseases. The majority of our diagnostic tests are applied to heart disease and cancer. The majority of treatments are for thyroid disease and thyroid cancer. Approximately 30,000 diagnostic and 300 therapeutic doses of medical isotopes are administered across Canada each week.

Technetium-99m is the most widely used isotope. It is the radioactive daughter of the parent molybdenum-99, the material that is produced in the reactor at Chalk River. Molybdenum-99 is transported from Chalk River to MDS Nordion in Canada for processing and is subsequently transported to the companies that make generators. Those companies are located in multiple countries, but the majority of the molybdenum is actually shipped to the U.S.A.

Because molybdenum-99 is radioactive and has a relatively short half-life of 66 hours, transportation of this product requires special and detailed arrangements to ensure the safety and reliability of supply. The generators are purchased by imaging facilities, hospitals, and radiopharmacies, and those generators continue to make technetium during their lifetimes, which is washed from the generator column by sterile saline and then compounded into a series of radiopharmaceutical doses that are administered to patients in the morning. Those radiopharmaceutical doses have a half-life of about six hours, the half-life of technetium. And it's quite a production in the morning to get all the radiopharmaceuticals ready. It's a very interesting thing to observe.

Of course, smaller and more remotely situated nuclear medicine departments usually receive a single generator weekly, and that renders them more vulnerable to disruption in supply than a large central facility that has on hand a large number of generators that are received at intervals through the week. I'm telling you this because I think this illustrates both the complexity and also the tenuous line of supply that exists between the manufacturers and the patients.

My involvement in this matter, firstly, was as the medical chief of the Department of Nuclear Medicine in Hamilton. Throughout this disruption of supply, I was responsible for triaging patients and for arranging alternate isotopes, specifically sodium fluoride, for bone scans, which we can produce with our own cyclotron at Hamilton Health Sciences. In fact, working with colleagues at the Cross Cancer Institute in Alberta, we were prepared and ready to implement a protocol to use that material should the shortage of isotopes have continued through to the end of January, which at one point was what we were hearing.

As well, I was responsible for communicating to medical staff and the public regarding the limitation of supply. As a member of Ontario's PET Steering Committee, I was responsible for providing advice to the Ontario government as to how other radiopharmaceuticals produced at Ontario's three medical cyclotrons might fill some of the gaps in isotope supply. And finally, as an adviser to Health Canada, I was providing advice on the impact on patient care and advice regarding alternative diagnostics and treatments.

So what was the impact on patient care? Well, we gathered information from colleagues in my own region, in the provinces, and from across the country. And we observed that there was a variable adverse impact on patient care, with the most severe occurring in eastern Canada, in smaller centres, and in rural areas without access to alternative technologies or the ability to access alternate supplies of isotopes.

We estimated that about 10% of the examinations being deferred because of this supply disruption could result in serious harm to the patient, and an additional 50% of deferred examinations could result in delays in treatment or in additional unnecessary pain and suffering to the patient. Finally, we concluded that the last 40% of diagnostic tests could in fact be safely deferred. But it must be noted that the deferral would then impact on an already over-stressed and over-burdened health care system.

● (1120)

I guess to many observers it might not have appeared that there was a crisis. I think this was largely due to the talented and dedicated staff who work in Canada's 245 nuclear medicine facilities and radiopharmacies. Patients were booked and rebooked to make the best use of radiopharmaceuticals. In fact, in my department the heroes were the three girls who sit on the front desk and talk to the patients every day.

Partially spent generators were transferred from centres like the Edmonton Radiopharmaceutical to more remote hospitals in order to meet the needs of the most urgent cases. In Vancouver, hospitals with a supply of technetium actually transported doses to those lacking supply so that the triage that was occurring right across the city would meet the need of the most urgent cases. However, despite those measures, had the Chalk River reactor not come online, we believe that unmanageable shortages would have occurred within a week of Parliament's decision.

We also know there was an impact outside Canada. From our colleagues in the American Society of Nuclear Medicine we learned that 84% of those surveyed indicated that their practice or facility was being impacted by the molybdenum shortage, and 62% of those facilities reported that they did not have access to an alternate supply of technetium.

I will turn to another issue. It became clear early on that there were communications issues that exacerbated the situation. There wasn't clear or timely information given to the medical community on the length of the shutdown at Chalk River or about the level of supply and impending shortages. The medical community, and especially those from the nuclear medicine community, believe there is room for improvement in when and how they are engaged and in how information is communicated to them.

I understand this committee's current study is focused on nuclear safety in Canada. However, because the members are also hearing testimony concerning the health impact of the closing of the Chalk River plant, I would hope you will consider including recommendations that will ensure the security of the supply of medical isotopes for the future.

Finally, the Canadian nuclear medicine community has taken considerable pride in the fact that Canada supplies the majority of the world's medical isotopes. At present, through our affiliation with the American Society of Nuclear Medicine, we are aware that both the National Academy of Sciences and the U.S. Congress are advocating for a domestic supply of medical isotopes. That position is of course strongly supported by the Society of Nuclear Medicine, and I believe Canada's leading role in this field has been placed at risk.

In closing, I would like to thank the committee for the opportunity to appear, and I would be pleased to answer any questions you might have.

● (1125)

The Chair: Thank you very much, Ms. Gulenchyn, for your presentation.

We go finally, for now, to Mr. Brian McGee, senior vice-president and chief nuclear officer, from Atomic Energy of Canada Limited.

Go ahead, please, sir.

Mr. Brian McGee (Senior Vice-President and Chief Nuclear Officer, Atomic Energy of Canada Limited): Thank you, Mr. Chair and committee members.

I appreciate the opportunity to speak before the committee today. I want to start by saying that the NRU reactor has operated safely. The reactor is operated by some of the most talented and capable people in the nuclear industry. We are deeply aware of and regret the impact this matter has had on the supply and delivery of medical isotopes to patients and their families around the world.

AECL is currently reviewing its own role in the events that led to today's hearing, and we expect to learn valuable lessons that can be applied in the future.

I would like to update you on the operation of the NRU reactor since we appeared last before the committee of the whole on December 11, 2007, and on the connection to the seismically qualified emergency power supplies to main cooling pumps 4 and 5.

I'd like to briefly describe the main and backup power supplies that service NRU. I will then provide a summary of NRU operational activities since December 11 and update you on isotope production.

Pumps 4 and 5 are two of eight main cooling pumps for the NRU reactor. Pumps 1, 4, 5, and 8 were designed to have two independent power supplies, a regular alternating current supply from the power grid that we light our houses and refrigerators with as well as a backup power supply that includes a diesel generator and banks of batteries to keep the pumps operating in case of a loss of alternating current supply.

The emergency power supply, or EPS, as we call it, consists of a separate bank of batteries and diesel generators, and it provides NRU with a third electrical power supply that is seismically qualified. EPS provides emergency backup power to the six safety upgrades that were installed in NRU. EPS is also designed to provide a third power supply to pumps 4 and 5.

I'd like to now update you on the status of the NRU reactor. On December 14, the work on pump 5 was completed and it was connected to EPS. Following the completion of the pump 5 connection to EPS, the reactor was safety restarted to high power in the early morning hours of December 16, 2007. Deliveries of isotopes resumed on December 18, 2007, and have continued at normal production levels since that time. As for the status of the modifications to NRU, I'm pleased to report that on February 1, 2008, the work on pump 4 was completed and it too was connected to the emergency power supply system. Work on both pumps was completed safely.

Following this most recent planned outage, the NRU reactor was restarted safely to high power just after midnight on Saturday, February 2, 2008. The reactor continues to operate safely.

There were two very minor seismic events in the area in December. Neither had any impact on NRU nor compromised its safety. Seismic events of this magnitude are not unusual.

Finally, we are maintaining regular communications with CNSC staff, and we have been open in providing them with relevant and timely information, including documentation relating to this issue and an updated safety case.

We're also providing regular updates on NRU progress, and we are participating in regular meetings with senior CNSC staff. We believe communications are strong and constructive.

In closing, I want to assure the committee that the focus and commitment of my entire team is to continue to operate the NRU reactor and all the licensed facilities on the Chalk River site safely and with due regard to the environment and Canada's international obligations.

The issues that caused the unfortunate shutdown of the NRU reactor, while important, should not distract us from working towards the future of the Canadian nuclear industry. AECL has an excellent track record of developing and delivering innovative nuclear solutions on time and on budget. Canada has one of the most stringent safety systems in the world, and this has been proven by Canada's nuclear safety record to date.

Thank you. I would be pleased to answer your questions.

● (1130)

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

We will now go directly to questions, first to the official opposition for seven minutes.

Mr. Alghabra, go ahead, please.

Mr. Omar Alghabra (Mississauga—Erindale, Lib.): Thank you, Mr. Chair. I want to thank all of the witnesses for being here today.

Mr. McGee, thank you for coming. Every time I hear you talk, whether in the media or in front of the House of Commons, you are very forthright and candid in your responses, and I appreciate that.

Before I ask you any questions, I'm just curious to know whether you have had any conversation with any member of the Conservative Party or staff before coming to the committee today.

Mr. Brian McGee: I have not.

Mr. Omar Alghabra: You understand that what we're trying to do here on behalf of Canadians is to figure out how we got to where we were. I know that's of interest to you and others. So far, the only thing we've seen is the firing of the independent commissioner, Ms. Keen. It's not that we're looking to have other people fired, but we really want to get to the bottom of this and figure out why it got there and how to prevent it from getting there again.

I'm going to start by asking you a few questions.

I have a letter here from AECL to the commission dated December 23, 2005. It says that "All seven NRU Upgrades are now fully operational per the conditions specified in [1] and your agreement in [2]." It lists the seven upgrades, including emergency power supply—EPS.

Can you explain this letter to me? We know now that those power supplies were not connected. Can you explain why, on December 23, 2005, we said those power supplies were connected?

Mr. Brian McGee: The letter says the power supplies were connected to the safety upgrades, and that is correct. They were not connected to the pumps. That was seen to be and was corresponded both to the CNSC staff and in return correspondence from CNSC staff, which we submitted to Parliament. It was always clearly documented that the EPS system was not connected to pumps 4 and 5, but the letter—

Mr. Omar Alghabra: What were they connected to?

Mr. Brian McGee: They were connected to the other safety system upgrades. That was what the letter described.

Mr. Omar Alghabra: Wasn't the seven upgrades requirement by the licence to connect the EPS to the pumps?

Mr. Brian McGee: There is no documentation that specifically says that was the requirement. There were seven safety system upgrades, of which EPS was one. EPS was designed to power the other safety system upgrades to give a seismically qualified power system to those upgrades so that their hazards qualified. In addition, EPS was to be connected to the pumps.

Mr. Omar Alghabra: The letter says EPS was connected or the upgrades were done, and it doesn't specify that they were not connected to the pumps. Wouldn't it be fair to assume they were connected to the pumps, since it says they were installed and implemented?

Mr. Brian McGee: In the absence of other correspondence, that might be a conclusion you could draw. But significant other correspondence has been submitted to Parliament that clearly articulates, both to CNSC staff and in return from CNSC staff to AECL, that the EPS was not connected to those pumps.

● (1135)

Mr. Omar Alghabra: You say "in the absence of other documents", but I have another document here dated March 2006. This is a licensing package that AECL submitted. In it under C3.3 it says:

> Status of NRU Upgrades
>
> The seven seismically and environmentally qualified safety upgrades identified in earlier engineering and safety reviews have been completed.

We have another document here re-emphasizing to the commission that the installation of those seven upgrades was completed. Don't you think that any person who reads that would assume that EPS was connected to the pumps?

Mr. Brian McGee: We're getting into documentation that I don't have in front of me, so it's difficult to respond to it in a proper manner. But I think what's important is that the reactor was operating safely, and everybody agrees with that.

On the question of the licensing basis, we have clear documentation and support for the fact that we were operating not only safely but within our licensing envelope. But I expect more from my organization. If you're asking if I am dissatisfied that these upgrades, these connections to the pumps, were not done in a more timely manner, I absolutely am. I've been consistent in saying that since the evening of December 11.

If there was a misunderstanding, that's part of the lesson that needs to come out of this that both ourselves and CNSC staff have to engage in, because this didn't need to happen. At some point it became an issue, and the correspondence led us to believe that we were forthright in describing the state of the facility. We didn't try to misdirect or mislead about that at all. It was clear in the minds in my organization that the commitment was to install the seven safety systems upgrades and connect EPS to those other safety system upgrades. Within my organization, the connections to pumps 4 and 5 were seen to be an enhancement. The correspondence that flowed back and forth tended to reinforce that.

Mr. Omar Alghabra: Mr. McGee, we have a situation here in which I think you're admitting yourself that this should have been installed. Why didn't it get installed? Why didn't the power supply get connected to the pumps?

Mr. Brian McGee: As I've said, the facility operated safely—

Mr. Omar Alghabra: But that's not the issue. You keep repeating that, Mr. McGee, but the licensing requirement is the job of the commission. They issue the requirements. You've accepted the requirements. I'm still curious as to why the power supply was not connected to the pumps within a year and a half.

Mr. Brian McGee: I do keep repeating that the facility operated safely because that's my primary mission, to ensure the safety of that facility, all the facilities on that site, and the safety of my staff and the public. From my point of view in this industry, that's my primary mission, so I have to keep repeating it because I believe it.

The issue of licensing aside, I've said that I'm dissatisfied with my performance and the performance of my organization in getting those connected in a more timely manner. What's important to realize is that in the queue of priorities, given that the organization didn't see it as a safety-related issue and given that it wasn't seen to be a licensing commitment, since we did have other licensing commitments that we were meeting and we regularly met, it was not given the attention and the priority that I believe it should have been given.

The other thing I'd like to mention is that in the period of time in question there was work going on on those upgrades. It wasn't that people weren't making progress. There was progress being made, and it was intended to have them connected over a period of time. And when the CNSC concerns become evident, we accelerated the timetable for doing that.

The Chair: Thank you, Mr. Alghabra. Your time is up.

We go now to the Bloc Québécois, to Madame DeBellefeuille, for seven minutes.

[*Translation*]

Mrs. Claude DeBellefeuille (Beauharnois—Salaberry, BQ): Good day, Mr. McGee. Thank you, Mr. Edwards.

My first question is for Mr. McGee. In fact, I have several questions for you, because I have been eagerly awaiting this opportunity to question you in committee. If you can provide brief answers, that will leave us as much time as possible for questions.

Can you tell me, yes or no, whether there were conditions attached to renewing the operating licence of the Chalk River facility? I am still not clear about this, even after listening to the answers you gave to my Liberal colleague. Were there conditions attached, yes or no?

● (1140)

[*English*]

Mr. Brian McGee: Thank you for the question.

There were many conditions associated with the renewal of the Chalk River licence.

[*Translation*]

Mrs. Claude DeBellefeuille: In your opinion, were all of the conditions met, in according with licensing requirements?

[*English*]

Mr. Brian McGee: Yes, they were.

[*Translation*]

Mrs. Claude DeBellefeuille: Which authority in Canada is responsible for determining the safety of nuclear facilities?

[*English*]

Mr. Brian McGee: My primary responsibility is to operate the facility safely and take it well beyond just simple regulatory and safety compliance. We provided feedback and information on the status of the commitments—

[*Translation*]

Mrs. Claude DeBellefeuille: I think you misunderstood my question, sir, perhaps because of the interpretation. I asked you which agency serves as the nuclear safety watchdog for Canadians and Quebeckers.

[*English*]

Mr. Brian McGee: The Canadian Nuclear Safety Commission is mandated to look after the safety of Canadians in this area.

[*Translation*]

Mrs. Claude DeBellefeuille: When the Canadian Nuclear Safety Commission determines that you have not met the licensing requirements and that the reactor is unsafe, what gives Atomic Energy of Canada the legitimate right to challenge this finding?

[*English*]

Mr. Brian McGee: Thank you for the question.

We didn't challenge that fact. When CNSC staff made it clear to us that they believed we were outside our licensing basis—they didn't say we were operating unsafely. I think that's important. In fact, they have said we were operating safely.

When they made it clear that we were outside our licensing basis, I responded to that. I have great respect for CNSC staff. They're competent, capable, credible people in this industry. So I took the only action available to me by keeping the reactor in a shutdown state. I did not challenge that at that point in time. In fact, that's why we kept the reactor shut down at that time.

[*Translation*]

Mrs. Claude DeBellefeuille: When the minister appeared before the committee, it was rumoured that you were the one who had decided to shut down the Chalk River nuclear reactor for an extended period of time because of safety concerns and licensing compliance issues. The minister told the committee that the reactor met operational and licensing requirements and that it was in fact the Commission that decided to uphold the order to shut down the reactor for an extended period of time.I have read different reports of the proceedings and, once again, there are some grey areas. Mr. McGee, were you in fact the one who decided to uphold the order to keep the reactor off line for an extended period of time?

[*English*]

Mr. Brian McGee: Thank you again for the question.

You asked in the previous question who has the responsibility for determining the licensing basis of a facility, and I answered that it was CNSC staff. So too, then, when the CNSC staff advise me that they believe I'm outside my licensing basis, even though they acknowledge that the reactor is still operating safely.... When I'm outside my licensing basis I have really no choice but to respond to that, both from a legal perspective and as well from a professional perspective, because of the respect I have for their opinion.

This industry is based on everybody being open to challenge, on a questioning attitude. We spend enormous effort training our people and developing a culture in the industry around everybody's being open to challenge and having to have a questioning attitude. So when people with the professional credentials and competency of the CNSC staff say to me, “We think you're outside your licensing basis”, I have to take that seriously and to respond appropriately. And I did: I kept the reactor shut down.

Subsequently, as a matter of testimony, it was made clear, including on December 6, that if we hadn't kept it shut down, the CNSC would have given us an order to shut it down. That's the nuance around this. It's very clear that if we hadn't kept it shut down, we would have been told to keep it shut down.

[*Translation*]

Mrs. Claude DeBellefeuille: Excuse me for interrupting you, sir. You have stated on separate occasions that you had proof that had you not brought the reactor back on line, the Commission would have ordered you to do so. I have yet to see the proof to that effect. I don't know if you can supply that evidence to the committee, but it would be interesting to see it.

What concerns me, Mr. McGee, is that in your initial report to the House of Commons, you accepted a fair bit of the blame for the situation. You stated that among other things, the problems stems from a breakdown within your organization in terms of efficiency and reviewing the safety analysis report. You admit that there was a problem. The surprising thing is that when he testified here, the Minister of Natural Resources didn't even reprimand your organization once, either for its lack of organization or for its efficiency problems. You spoke of these problems several times in the course of various meetings, as the reports attest to. I have to wonder why the minister said nothing. I wondered if the minister would have been able to fire someone at Atomic Energy of Canada instead of Ms. Keen. Perhaps the reason was the dearth of leaders at Atomic Energy of Canada. There was no longer any CEO or chairman of the board of directors. You, the Vice Chairman, found yourself managing the crisis along with your colleagues, with no senior managers to be found. Do you think that explains why the minister did not point the finger at you, even though you acknowledged your organization's shortcomings?

● (1145)

[*English*]

Mr. Brian McGee: You're asking me to speak to what's in the mind of another person. What I can say to you is that I've been consistent since December 11, acknowledging where my performance and the performance of my organization failed to meet my expectations.

I have some of the best people in the industry as part of my team. My job is to provide them with the best leadership I'm capable of providing. It's not my position to make the judgment whether or not it's good enough; it's up to others to decide that. My job is to lead my organization in the best way I can. When it comes to performance issues—and we're not talking about safety and we're not talking about licensing basis; it's about going well beyond that.... That's what this industry is about, and that's what my expectations are all about. When it doesn't happen, then, if I'm going to be acceptable as a leader, I need to take responsibility and accountability for it.

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

We go now to Mr. Trost for seven minutes.

Mr. Bradley Trost (Saskatoon—Humboldt, CPC): Thank you, Mr. Chair.

I would like to direct my questions first to AECL, and to ask for a bit of a clarification: what were we looking at had there been a potential accident? There are discussions about fuel failure and public harm. In one of the notes you put out, you talked about a worst-case scenario, radiation exposures to workers and to the public, in terms of a CT scan, etc.

Could you elaborate on the worst-case scenario and on what you meant in the letter you posted on the AECL website? What was the potential for a fuel failure? What was the risk for public harm?

Mr. Brian McGee: Thank you for the questions.

The reactor has operated safely for more than 50 years now, and in the same geographic area. There are no international standards for fuel failures, so what we were responding to was the reality of the situation that one in a thousand is the calculated probability of an earthquake of sufficient magnitude that is calculated to be around six on the Richter scale, centred on the NRU facility. That is a one-in-a-thousand probability, based on the calculations.

For the onset of fuel failures to occur, the following things have to happen: the earthquake has to be centred on the NRU facility; there has to be total loss of the grid, so the electrical power from the power system; and the diesel generators and the battery backups have to fail.

We don't credit any operator action. There's no intervention on the part of the operating staff, so it's not credited at all. That may sound a bit silly, but that's the way safety and accident analysis goes. You assume that your operators are not capable of responding.

So that assumes you've lost power to the pumps and that you have no forced cooling flow to the reactor. Half an hour later, the reactor water starts to boil. A half hour after that you get the onset of fuel failures. You don't get core damage at that point, but you get the onset of fuel failures.

If it still goes unarrested, you'll ultimately get core damage. If you get the most severe core damage accident, the dose to the workers working right at the facility, at the Chalk River site, is roughly half of what we would get if we were to undergo a CT scan.

The dose, the radiation exposure...or let me correct that. That's lingo from the industry. We're talking about radiation exposure to the workers being roughly half of what you would get if you underwent a CT scan. The radiation exposure to a member of the public would be roughly half of the radiation exposure from a cardiovascular diagnostic treatment.

● (1150)

Mr. Bradley Trost: So again, to bring that into very simple terms, what CNSC was going nuts about was the concern that someone at the plant might receive, in an extreme circumstance, less exposure than a CT scan, and that the general public would receive half the radiation exposure of a cardiovascular diagnostic treatment.

For the lay public then, if something goes wrong, we're talking about stuff in the neighbourhood of X-rays as far as the risk of exposure.

Mr. Brian McGee: That's correct.

Mr. Bradley Trost: Okay.

You started to get into—and I found this an extraordinarily curious statement by Ms. Keen when she was in front of the committee—the one-in-a-thousand chance of something going wrong. I didn't fully understand what she was meaning there, because to me there is a difference between a one-in-a-thousand year and a one-in-a-thousand chance.

So perhaps you would elaborate a little bit more—in many ways, I'm asking you to go over the same ground as you just did—on the probability of something happening at the plant. This is a point that needs to be stressed over and over again. What is the probability? It wasn't one in a thousand. There is no international standard of one in a million. What is the probability of something major going wrong prior to these pumps being backed up seismically with the electrical system? What is the probability under the old situation?

Mr. Brian McGee: Thank you for the question. I'm going to assume that you're asking about what was the probability with no pumps connected to the emergency power supply system.

Mr. Bradley Trost: Correct.

Mr. Brian McGee: The way in which accident and safety analysis goes is that we don't go beyond and calculate that chain of probabilities because it's the most conservative number that's used. I don't have that number with me today. We could make it available to the committee, if it's important.

The nature of safety analysis is to look at the worst-case scenario, and that's the one-in-a-thousand probability of an earthquake. But all the rest, the chain of events that occurs from there, takes that probability to a much lesser number.

Mr. Bradley Trost: Another statement that was made under previous testimony is that the NRU would not currently meet international licensing standards. I find this curious, because I understand other reactors in the world are of similar vintage and design.

In your opinion, if it were to be licensed again today, would it meet international standards? That statement that it wouldn't, was that correct, or is it correct that it would meet international standards today?

Mr. Brian McGee: The reactor itself was designed and built in 1957 and has incredible margins. It's a very robust, very strong design. I can't tell you why that was; it's too far back in time. So the reactor itself was designed to the standards at that time.

What's important is that it's not a power reactor. What's happening in some of the dialogues, which is probably just natural, is power reactor standards are being interchanged with research reactor standards. This is a research reactor. It operates at low pressure and low temperature. It still has to be operated safely, and you still have to ensure it has the proper margins, but we need to make sure we're talking about research reactor standards and not power reactor standards in some of these discussions.

To answer your question directly, would it meet today's standards for a research reactor if it were being constructed today? It would not, but that's not uncommon. During the life cycle of any nuclear facility, standards change.

Let me give you an example. I drive a vehicle that doesn't have side airbags. When I was a kid, I rode in a vehicle that didn't have seat belts, which probably gives you an indication of my age. So over the progression of the auto industry, we've gone to seat belts and then we went to driver side airbags and then we went to passenger side airbags as well, and now you can buy vehicles with side curtain airbags.

Safety standards are always being increased, but we don't retire vehicles that don't have side curtain airbags. I still drive one, and my guess is that many of us in the room do.

So that's the way to try to rationalize these safety system upgrades. The industry is always elevating the bar and always trying to take the technology to the safest possible level.

● (1155)

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

Mr. Trost, your time is up.

Now we will go to our fourth witness, who is joining the other three at the table via video conference. We have Dr. Thomas Perry from the University of British Columbia. He's with the Department of Medicine and Department of Anesthesiology, Pharmacology and Therapeutics.

Go ahead, please, Dr. Perry, with your five- to seven-minute presentation. Then we'll open it up to questions, which could be directed to any of the four witnesses.

Dr. Thomas Perry (Department of Medicine and Department of Anesthesiology, Pharmacology & Therapeutics, University of British Columbia): Good morning. Thank you, Mr. Chair. I thank Vancouver General for setting up the video conference so I could participate with you.

I had asked the clerk of the committee, Mr. Mariage, to circulate to you, if possible, a transcript or at least the audiotape of what I said during an interview on *As It Happens* a few weeks ago. I think it's more efficient if I assume the members know that content. It was fairly simple.

The Chair: That has been done. They have that.

Dr. Thomas Perry: The only thing I could add to that is I hope your members understand I'm not an expert in nuclear medicine. I'm one of the people who requisitions nuclear medicine studies as part of my regular work as a hospital internist. I'm a reasonably senior doctor, so I have many colleagues whom I've practised with for a couple of decades, and I'm a working Joe doctor.

To prepare for this appearance I did do a little bit of background research locally yesterday. I spoke with colleagues in the nuclear medicine department and I thought I could share with you that, if I understand their perspective accurately, in British Columbia there was no crisis in December. One of them said it seemed like much ado about nothing, from their point of view.

You might not be aware that they were having daily teleconferences around the province of British Columbia to ensure the supply of radioactive molybdenum, which they obtain from Atomic Energy of Canada, was shared around the province to get the maximum benefit from it.

From my colleague's perspective, if I understood him accurately, patient procedures or tests were being scheduled according to priority, so those that were potentially the most important to patients were still getting done.

That's the same experience I had working in my hospital. For the full month of December, I was puzzled by the news reports and the middle-of-the-night sitting of Parliament, because we certainly didn't perceive any crisis out here.

I think the only other thing that would perhaps put things into perspective from our point of view, at least in British Columbia, is when I met a senior family doctor at the swimming pool last night and told him I was appearing this morning, he said there are real health crises, but this was not one of them.

With that, if there's anything I can enlighten you on by way of questions, I'd be happy to.

The Chair: Thank you very much, Dr. Perry.

We will start with the New Democrat member of the committee.

Ms. Bell, go ahead, for seven minutes.

Ms. Catherine Bell (Vancouver Island North, NDP): Thank you, Mr. Chair.

Thank you, Dr. Perry, for taking the time to appear before us today. I understand you were going to be going into surgery and that's why you couldn't come.

Dr. Thomas Perry: I hope I'm not going into surgery because I'd be the patient.

Ms. Catherine Bell: Okay, sorry.

Dr. Thomas Perry: I have a pager here. I'm on duty.

Ms. Catherine Bell: Okay, that's what it was. Well, thank you anyway.

You've said that there was no crisis in British Columbia that you were aware of. I just wondered who would determine that there is a crisis in nuclear medicine.

Dr. Thomas Perry: For example, I worked through the SARS crisis. I'm actually the doctor who looked after the most patients with SARS in B.C. I looked after two patients. That was a true crisis. We were very frightened of what was happening to the public and to us, as health professionals, and were even more alarmed by what was happening in Toronto and China. In that case, we all received email and paper bulletins from the hospital administration alerting us to what was going on.

Now, norovirus, or so-called Norwalk-type virus, presents a crisis in a hospital because people and staff get sick and wards have to be closed. We get a temporary crisis once every few months in which we're alerted by the hospital. We got no such alert that I'm aware of in British Columbia. And speaking with a colleague in nuclear medicine yesterday, he confirmed that the nuclear medicine specialists who were apportioning tests did not perceive any crisis. They were handling the situation.

The other intriguing thing that I guess made me send an email to *As It Happens* and that led to an interview, which now leads to me appearing before you, is having run into a senior radiation oncologist from the BC Cancer Agency, just while signing off records in the medical records room. I asked him, “Did you perceive a crisis in December?” and his answer was, “Well, no, we had a contingency plan at the Cancer Agency”.

I think if there had been perceived to be a crisis, senior administrative people in B.C. would have alerted us to that, perhaps even the Ministry of Health.

● (1200)

Ms. Catherine Bell: My question was who would have alerted you. So the Ministry of Health would have potentially done that?

Dr. Thomas Perry: The senior medical director in our hospital would have emailed me and everyone else.

Ms. Catherine Bell: I asked that question because Tony Clement, the Minister of Health federally, was before us and said there was a shortage in the Victoria hospital. But you weren't hearing that, and you would have been aware if that was the case, then, if you were talking with your colleagues.

Dr. Thomas Perry: I emphasize that if you want to pursue this, the right people to call as witnesses are the nuclear radiologists and the technicians who were really handling these issues. But a colleague informed me yesterday that the Royal Columbian Hospital in New Westminster, if I understood correctly, obtains radioactive molybdenum from a different supplier and had some that it could share as well, and that there was a daily teleconference occurring in British Columbia by the nuclear medicine specialists to ensure that supplies of radioisotopes were apportioned according to the greatest need. For example, a so-called elective cardiac scan for someone suspected of having angina might have been deferred because it's typically not a highly productive scan—it often doesn't answer questions—whereas others that were deemed to be crucial would be pursued.

There are very few nuclear medicine scans that are crucial, and the test of that is that most nuclear medicine facilities are not open at night and never on weekends. We never get an emergency scan in my practice.

Ms. Catherine Bell: Thank you.

One of the things that we're hearing, and I heard it again today from Ms. Gulenchyn, and I invite you to answer this question as well, is that other diagnostics were available, other treatments. My question is this. Would anyone die if they didn't receive the treatments or the diagnostics? I keep hearing from the minister that people were going to die.

I understand that there may have been delays, that definitely there was going to be a shortage, that people were managing that shortage, and I heard from Ms. Gulenchyn that if we didn't act in Parliament when we did, the crisis would have escalated or we would have indeed been in a crisis across Canada. We're hearing a different story from the east than from the west. I just wondered if we can figure out whether there were conversations across the country. Ms. Gulenchyn said back on December 6 in an interview that she didn't expect the delays to be life-threatening. I'd like her also to answer the question, because you're both saying the same thing, that this was not a life-threatening crisis.

Dr. Thomas Perry: Unfortunately, I wasn't able to listen to Dr. Gulenchyn's testimony, but I certainly encourage you to pursue this, because the reason I'm here before you is I had a different interpretation of the middle-of-the-night sitting of Parliament. I did not agree with your colleague who called it Parliament's finest hour. I thought it was shocking, and I wrote to a number of MPs by email to say how disturbed I was that Parliament would meet in the middle of the night and at excessive speed agree to legislation. It's not because I'm concerned about the safety of the reactor—that doesn't frighten me at all—but the overruling of a regulatory authority, if there had not truly been a crisis, concerns me enormously. So I certainly encourage you to pursue it.

To the best of my medical knowledge, I've been struggling to think of a nuclear medicine procedure that cannot be achieved by another medium, another technique. Studies of the thyroid gland with radioactive iodine would be one example where it's difficult to obtain the same information otherwise. But apparently radioactive iodine comes from different sources, according to my information.

Radioisotopes are very seldom used for emergency treatment. I have not personally been able to come up with an example of how they might be used for emergency treatment. The most common use is to treat thyroid disorders, and that is never an emergency. It's not done on weekends or in the middle of the night, for example. So I can well believe as a doctor that there would have been substantial problems, and difficulties and embarrassments, or fear for patients. But to say, for example, that a patient with breast cancer metastatic to the bone is going to suffer or lose his or her life because we can't image those with radionuclides I don't think is true. There are other techniques to obtain those images, such as CT scanning, or MRI, or even plain X-rays.

I have not been able personally to think of an example where it was absolutely essential. If there were such examples in British Columbia, they were certainly all being serviced.

● (1205)

The Chair: Thank you, Dr. Perry.

I'll now go to Ms. Gulenchyn to answer that question as well. Go ahead, please.

Dr. Karen Gulenchyn: Thank you.

Let me start, first of all, with the fact that there were major differences across the country. Our information led us to understand that British Columbia was handling and managing this issue the best of all of the provinces in the country. That was largely because there were a fair number of institutions in British Columbia that were contracted with a supply coming from an alternative supplier who was not dependent upon molybdenum that came from Chalk River. They then had a capacity to share and in fact ameliorate the situation that did not exist in other centres.

Secondly, let me point out that many of the difficulties that were experienced in the delivery of medical care occurred in smaller centres, where in fact they are on call at night and on call at the weekend to provide nuclear medicine services, unlike the major downtown institutions in Toronto, Ottawa, Vancouver, and Edmonton, where there is relatively good access to CT and MR, which provide for alternative imaging for many of these problems. Therefore, the problems were actually occurring in the smaller centres; the issues of lack of access to care were much more acute in those centres than they were in major urban centres.

It is absolutely true that therapy was not an issue. Therapy for using radionuclides in most cases is elective, and at no point was there an issue with respect to supply of radiopharmaceuticals that are used for treatment. However, therapy depends upon accurate diagnosis, and it is my belief, and certainly the belief of most of my colleagues, that nuclear medicine plays a pivotal role in making an accurate diagnosis.

In the case of Ontario, Cancer Care Ontario in fact met on an emergency basis to consider the lack of isotopes. There was in fact a central directive that came from Cancer Care Ontario, co-signed by the University Health Network and supported by the Government of Ontario, directing that the various nuclear medicine facilities should place priority upon doing bone scans, because it was viewed that there was no good alternative to bone scanning for the diagnosis of metastatic disease and the staging of treatment, and that the lack of access to bone scanning would lead to delays in staging and delays in treatment.

Finally, I think we need to understand that the health care system in Canada is a relatively constrained system. There is not a lot of extra capacity within the system. We don't have a lot of extra beds; we don't have a lot of extra CTs; we don't have a lot of extra MRs; we don't have a lot of extra high technology that's sitting unused. Therefore, when any portion of the system is withdrawn, its withdrawal has the potential to create backlogs that could take weeks and months to resolve.

● (1210)

The Chair: Thank you very much, Ms. Gulenchyn.

We now go to the official opposition for a second round of five minutes.

Mr. St. Amand, go ahead, please.

Mr. Lloyd St. Amand (Brant, Lib.): Thank you very much, Mr. Chair.

As expressed by my colleague, Mr. Alghabra, we appreciate your candour, Mr. McGee.

You wrote on December 7 to Linda Keen and said:

> Let me say at the outset that I fully appreciate the concerns you expressed at the December 6, 2007 meeting respecting AECL's performance under the licence. AECL is committed, on an urgent basis, to the connection of the emergency power supply to pumps 104 and 105.

It rather sounds, Mr. McGee, that you were agreeing with Linda Keen that she was in fact doing her job, pointing out legitimate concerns to AECL, and you were going to immediately, on an urgent basis, react to her concerns.

In your professional relationship with Linda Keen—and I would appreciate just a short answer, because I have another area—did she at any time fail to show leadership, in your view, or act in any way that would be considered not competent?

The Chair: Go ahead, Mr. McGee.

Mr. Brian McGee: You've asked a number of questions there, so I may not be able to keep the answers short.

The letter I believe you were referring to was not written by me; it was written by Dr. Torgerson. It was intended to try to move us toward a one-pump start-up solution. By the time we got to the December 7 point, a number of things—

Mr. Lloyd St. Amand: Excuse me, Mr. McGee. With respect, the letter was just a preamble. The direct question—and there was only one—was did she at any time demonstrate a lack of leadership or incompetence? That's the question.

Mr. Brian McGee: Our relationship—

The Chair: Mr. St. Armand, please give the witnesses a reasonable time to answer. It is appropriate, at times, to interject if you believe you've gotten the answer, but I do believe it's proper to give Mr. McGee time to answer the question.

Go ahead, please, Mr. McGee.

Mr. Brian McGee: Thank you, Mr. Chair.

My relationship and the relationship of my organization is with CNSC staff. I think you've heard me describe it as a professional relationship, and we have great respect for CNSC staff.

My relationship with the ex-president and ex-chair of the commission is only across the commission table. I had no other relationship with her, so I have no opinion on that, and I have no ability to form an opinion on that. My relationship is that one-dimensional.

Mr. Lloyd St. Amand: All right.

The more we delve into this, Mr. McGee—and we heard from Dr. Perry, who told us pretty clearly that, in his view, there was no serious health crisis, and we heard from Mr. Edwards this morning that the firing of Linda Keen was, in his view, not justified—it rather strikes me that we're getting to the nub of the matter, the nub of it being the protection of MDS Nordion's market share and profit margin, and AECL's involvement in that.

I just want to ask you about the relationship between those two entities. Number one, how does AECL receive funding or money from MDS Nordion, or does it receive it?

Mr. Brian McGee: We have a commercial relationship with MDS Nordion. As the primary supplier of medical isotopes, we're paid, as would be the case in any other supply chain system, for the product we provide.

I don't have a lot of familiarity with the history of the arrangement, but I know it goes back many years.

Mr. Lloyd St. Amand: The history is less relevant to us than the current details.

What, on an annual basis, would AECL receive from MDS Nordion for the supply of isotopes from Chalk River?

Mr. Brian McGee: I didn't come prepared with those numbers, so if I were to share them in this forum they would be just off the top of my head.

You made a statement earlier that there was a notion of protecting MDS Nordion. My focus is the safe operation of the facility and the relationship with CNSC staff. My focus is that singular.

● (1215)

Mr. Lloyd St. Amand: All right.

Can you estimate for us, in your capacity as vice-president at AECL, the approximate amount that would be received by AECL in a calendar year from MDS Nordion?

Mr. Brian McGee: Thank you for the question.

It would be in the $30 million range for medical isotopes.

Mr. Lloyd St. Amand: So it's a big dollar.

Mr. Brian McGee: It is a significant amount of money.

As I said, there is a lot of history in terms of the relationship with MDS Nordion. I don't want to go into a lot of detail, because the relationship and AECL's role and relationship go back many years now.

Mr. Lloyd St. Amand: No, we understand that.

Mr. Brian McGee: But what I would say to you is that if you're leading to the question of whether I was driven by money, the medical isotope stream for me, as it was set up, as I inherited it, is not a particularly profitable stream. So it was not a money-driven question.

Mr. Lloyd St. Amand: All right.

The Chair: Thank you, Mr. St. Armand. Your time is up.

We go now to the Bloc, to Monsieur Ouellet, for five minutes.

Go ahead, Monsieur Ouellet.

[*Translation*]

Mr. Christian Ouellet (Brome—Missisquoi, BQ): Thank you, Mr. Chairman.

Thank you, Mr. Edwards. Earlier, in your opening remarks, you mentioned that some of the responsibility rests with MDS Nordion. We have just discussed that, but I would like to come back to the subject. In what way do you feel MDS Nordion is responsible? Did this company's involvement make the crisis worse in some way? Did it neglect to do what it could have done, for example, negotiate agreements to supply medical isotopes from other countries? What role do you think MDS Nordion had to play in this crisis?

[*English*]

Mr. Gordon Edwards: I have to tell you, in answering this question, that I'm not privy to any special knowledge about the inner workings of MDS Nordion, but I did look at the communications they have been sending out over the last year or so.

In March of 2007, for example, they sent a letter to their clients, the people who purchased the isotopes, saying that they could be assured that the production would be ramped up and that it would be very reliable. I looked for other letters, other indications of a public nature, that Nordion may have been giving a full picture to clients—that because we're depending on a 50-year-old reactor there could be a possibility of breakdown, or at least that we are cooperating with other suppliers in order to ensure that there will be a supply in case there is an unexpected shutdown.

When you have a 50-year-old reactor—even new reactors, as we have now—and you shut down for maintenance, it's always possible that it ends up being a lot longer than you expect. This is happening right now in Gentilly, in Quebec. The shutdown is weeks longer than originally anticipated.

I think it's only prudent to have those arrangements in place and to have those alternative supplies ready to go, and to be able to notify people ahead of time. From what I've been able to perceive from my limited perspective of just gathering information that's public, I don't see any indication of any of that.

From reading the transcripts of the CNSC meetings, I am also struck by the fact that what we really have here is a rather persistent failure to communicate the whole truth. It would have been very simple I think for AECL, when it said the updates had all been satisfied, to add that there were a few things undone, and to list what those undone things were.

I think it's revealing, in fact, that Mr. McGee mentioned that the communication is primarily with the staff rather than with the commissioners. But the commissioners are the ones who are really challenged to make the decisions. I think the important thing is that the commissioners be properly informed. They, not the staff, are the ones who have the responsibility of making these decisions.

[*Translation*]

Mr. Christian Ouellet: Thank you. Getting back to who is responsible for the crisis, earlier on in your testimony, Mr. Edwards, you stated that AECL was also partly responsible. I'm wondering if you had the chance to read an article that appeared recently in the Toronto Star and that reported the following:

[*English*]

> As well, top AECL management was repeatedly hauled on the carpet before the Nuclear Safety Commission and its predecessor, the Atomic Energy Control Board, to explain poor operating practices at the Universal reactor, including foot-dragging on implementing safety upgrades ordered by the federal regulator.
>
> In June 2005, staff at the safety commission said in a written report that the AECL staff running the aging Universal reactor were prone to "overconfidence," "complacency" and "deficiencies in management oversight and safety culture."

● (1220)

[*Translation*]

Was this what you were referring to earlier when you stated that they are responsible, or at least partly responsible?

[*English*]

Mr. Gordon Edwards: I do believe that one of the things that was shocking to the commissioners...and not just to Linda Keen. I think anybody who reads the transcript will notice that Linda Keen, in her role as chair, gave the other commissioners ample opportunity to ask questions before she said a word. The other commissioners were quite shocked at the kind of attitude expressed by AECL toward the safety concerns.

I have to tell you that I was shocked myself this morning to hear Mr. McGee give such a complacent answer toward the so-called worst-case scenario. I think it's very important to realize that although Mr. McGee repeated over and over again that the plant was operating safely, that's not what these emergency systems are for. It's not about normal operation; it's about emergencies. So to say that it's operating safely, it's operating safely, it's operating safely is to have a complacent attitude toward what might go wrong.

One of the findings of the president's commission on Three Mile Island back in 1980, after the Three Mile Island accident in 1979, was that the principal cause of the accident was overconfidence on the part of the operators that it was inherently safe. Until that attitude changes and they stop regarding it as inherently safe, there will be more such accidents.

I also strongly disagree with the description of the worst-case scenario. I'm sure Mr. McGee knows full well that in 1952, when the much smaller NRX reactor suffered a catastrophic accident, there was a series of explosions. It blew the roof off. The core of the reactor had to be buried on site somewhere. It was too radioactive for contact, even, with humans.

So I—

The Chair: Thank you, Mr. Edwards. Time is more than up here.

Mr. Gordon Edwards: Okay. I just want to make sure it's recorded that I strongly disagree with this worst-case scenario presented today.

The Chair: You've made the point.

Merci, Monsieur Ouellet.

We go now to the Conservative Party, Ms. Gallant, for five minutes.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Thank you, Mr. Chairman, and through you, to Mr. McGee.

It's my understanding that the CNSC has an office on site. They have three inspectors at AECL. We've been told that it was only in November of last year that they came to understand that the emergency power supplies to the pumps were not hooked up.

How did it come to pass that they were there for over a year, these three inspectors, and they didn't notice it?

Mr. Brian McGee: I really can't comment on why they wouldn't have noticed it earlier. We provide full open access. We work closely with CNSC staff. I really can't provide you with any insight into the time involved.

Mrs. Cheryl Gallant: So there were no discussions that would lend to the idea that they did know that these weren't connected and just did not perceive it as an urgent situation?

Mr. Brian McGee: The correspondence back and forth between us and the commission, as I've mentioned earlier, clearly articulated that the connections were not made. The discussions of concern, where they started to express concern, started in mid-November.

Mrs. Cheryl Gallant: Thank you.

We have talked about all reactors experiencing fuel failures from time to time and that there are no safety consequences to the public, the employees, or the reactor. Now, in this situation, should there be a fuel failure as a consequence of a seismic event.... It's my understanding that a severe earthquake would have to occur with its epicentre directly under the NRU reactor at Chalk River, and there's no record of that ever happening. The provincial power grid would have to fail. Backup diesel power and backup battery power supplies would have to be knocked out. There would have to be no NRU operating staff available to take any action. After about half an hour, the reactor coolant would begin to boil. After about an hour, the reactor coolant would be boiled away, and we would have the onset of fuel failure. If all these situations arose in order, the radiation exposure to the workers would be less than half the radiation exposure received from a CT scan.

So why was it so critical to the CNSC to keep AECL in shutdown indefinitely and deprive the cancer patients of their treatments?

● (1225)

Mr. Brian McGee: We believe this did not have to happen. It's a matter of record that CNSC staff have acknowledged the improvements that have been going on at the site. It's a matter of record that the facility was operated safely up until the time of this situation. We believe that if the CNSC had concerns, we could have addressed the concerns without having to force a shutdown of the facility.

Mrs. Cheryl Gallant: Why was it so important at this particular juncture in time that they decided they were going to keep you shut down until these connections were made?

Mr. Brian McGee: Thank you for the question, but you know, I'm in a position where I can't enlighten you because I don't fully understand it.

Mrs. Cheryl Gallant: Okay. The reason they wanted to keep you in shutdown was because you were in violation of licence. It's my understanding that there's a process involved to determine whether or not someone is in violation of their licence.

Was this process the normal process followed in this situation?

Mr. Brian McGee: No, the process was not followed. We were not given an opportunity to present our case, to properly research our case, and to put our case in front of the commission.

Mrs. Cheryl Gallant: One of the reasons it became necessary for Parliament to act is that the MAPLEs are not done. Aside from the coefficient issue, I understand there are other serious problems with the physical plant. Now, I'm told that you work well with all the unions and the operators, and they said that never before had they seen a person in your role take such a hands-on approach to the situation in the plant. So if we don't have a problem with the tradespeople, the operators, where is this resistance or obstruction coming from around being able to go forth with the physical aspects of the MAPLE reactor as opposed to the scientific aspects, which are being worked on with respect to the coefficient?

Mr. Brian McGee: Thank you for the question.

I have said a number of times that the people who are part of my team are among the very best in this industry. I have great respect for them and try to give them strong leadership.

On the MAPLE reactors, there is a lot of history there. We want to undertake a series-400 test to help us understand why the power coefficient of reactivity exists and its nature. We're working with CNSC staff to get approval to do that.

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

We'll go now to the third round, starting with the official opposition and then going to the government.

Mr. Tonks is next for five minutes, please.

Mr. Alan Tonks (York South—Weston, Lib.): Thank you, Mr. Chairman.

I have three questions. To Mr. McGee, you've indicated that the upgrades have been completed. What was the cost?

Dr. Gulenchyn indicated there was a lack of information supplied. I think the committee would be interested in the result of that, in your estimation. Who was responsible for giving you that information? Was it the Ministry of Health? The minister indicated he had put information forward, so I think the committee would like to know about that.

To Mr. McGee, I think it's critical, if there is a recurrence of anything close to what has occurred, that it is absolutely clear where the responsibility lies to share information with those who are part of the international isotope supply group in advance. On the basis of our experience now, who is responsible for doing that? Is it AECL or, in this particular case, MDS Nordion? We know what happened, but what would happen again as a result of what we've learned?

Those are my three questions, Mr. Chair. Perhaps Mr. McGee could begin on the cost.

Mr. Brian McGee: Let me start with the question on the cost of the upgrades. I think it's important to note that the genesis of these upgrades was in the early 1990s. Through the 1990s these upgrades were being worked on. The site was chronically underfunded during that period of time—that's a matter of record as well.

On the timing of the upgrades, although the dollar figure was roughly $10 million—I can get you the exact number, but I'm working from memory here—it may not seem like a lot of money, given the current situation, but you have to understand it in the context of funding to AECL through that period of time. That was a factor in staging the work—not that it wasn't being slowed down because of that, from what I can tell. I don't have firsthand knowledge of it, but the staging of the work was done based on the funding available at the time.

On communication, we have a communication protocol in place now. We normally communicate with Nordion; we don't communicate further down the supply chain than Nordion. We had some interaction with businesses further down the supply chain as a result of this situation, but that was very unusual. In fact, until they contacted us we didn't even know they existed, frankly.

Our relationship is with Nordion. We've enhanced our communications with them, although I think it was pretty strong. We have communications with NRCan, and we also have communications protocols in place now with the minister's office, which did not exist before.

● (1230)

Mr. Alan Tonks: Thank you.

Dr. Gulenchyn, you have the final question.

Dr. Karen Gulenchyn: First of all, I think it's fair to say that there was no formal channel of communication in place when all of this began. I first learned that there was an issue on November 30, which was a Friday, sitting in my office, when my charge technologist came in and said, "We're not going to have any isotope to do the lymphocentigraphy on Monday." Now we fixed that problem with a phone call, but we had not been told what the problem was. We had simply been told, from our supplier—because we deal directly with a radiopharmacy—that they had not received their generators from Bristol-Myers Squibb and that it had something to do, and this was the information I got, with earthquakes in the Ottawa Valley, and I just sort of took that in passing.

It was only later in the subsequent week, probably Wednesday, that I realized there was actually a more serious shortage. Again, that information came from our radiopharmacy, which was operated by Bristol-Myers Squibb. So there really was no formal channel of communication.

Because we were looking for an alternative to the bone scan agent in Ontario and because my facility actually had the capacity to produce an alternative, I called Health Canada and asked if we could look at using this alternative, because in order to use it, there needed to be a formal protocol put into place. That was when my communications with Health Canada began.

We have identified, as part of the ad hoc working group, that this communication issue does need to be worked on. It's my understanding that there is a protocol in place now, which I believe Mr. McGee has referred to. The advisory panel is currently working on a report that we will be presenting to the Minister of Health, stressing the need for good communication when these issues occur.

Mr. Alan Tonks: Just pursuant to those—

The Chair: Thank you Dr. Gulenchyn.

Thank you, Mr. Tonks.

Mr. Alan Tonks: Could we have copies of those—

The Chair: Your time is up.

Mr. Alan Tonks: —provided to the committee?

The Chair: Could we have copies of the document you referred to?

Dr. Karen Gulenchyn: You mean the communication protocol currently in place? I'll ask the people at the Ministry of Health, or perhaps you can. It's a Ministry of Health document with NRCan.

The Chair: Thank you very much. The clerk will be in touch with you, or perhaps you could get it to the clerk, if it is available.

We'll go now to Mr. Allen for five minutes, please.

Mr. Mike Allen (Tobique—Mactaquac, CPC): Thank you, Mr. Chair, and thank you to the witnesses for being here.

I would like to just ask a few questions, focusing on the health side of this. I was interested to hear Mr. Perry's comments—they had kind of a narrow focus—on being concerned about B.C.

I'm from eastern Canada. It was very acute out there. We had hundreds of procedures cancelled in Nova Scotia. We had our Moncton hospital, which is very well known for cancer care and heart care, cancelling procedures. River Valley Health services, a predominant portion of which is in my riding of Tobique—Mactaquac, does 70 diagnostics a week, and these were all going to be put off. So I suggest that there's been quite an impact from that standpoint.

Dr. Gulenchyn, I wanted to ask you a question. You are part of this ad hoc working group and an advisory panel. Who were the major players? When I say "who", I mean what types of people were part of that advisory panel? Seeing as you are the medical chief in the department of nuclear medicine—

● (1235)

Dr. Karen Gulenchyn: Yes.

Mr. Mike Allen: —is it typically people like that?

Dr. Karen Gulenchyn: Actually, there was a broader variety of people involved. There was a representative of the cardiology community, a representative of the oncology community, and the head of the Edmonton Radiopharmaceutical Centre, who provided really excellent technical advice as to how these products were distributed and what changes could be made to their distribution to improve the situation. Those were the people from the medical community who were involved. Then there were representatives as well from Health Canada.

Mr. Mike Allen: So there's a very broad cross-section of people who are very experienced in these types of procedures and very experienced in isotopes.

Dr. Karen Gulenchyn: And they are also experienced in the use of those procedures.

Mr. Mike Allen: Okay.

My second question is about replacements. There's been a lot of discussion, and the Minister of Health talked in his testimony, about alternatives and the ability to go offshore for certain of these alternatives. It was very clear in that testimony that the French, the Dutch, and the Belgians could probably supply—on the fringes, I guess—maybe 15%, but that even then that supply couldn't come until possibly even as late as the end of December.

Did you read that information, seeing as this was a pending health crisis? What would have been the result if Chalk River had not started and all those things had been in play?

Dr. Karen Gulenchyn: Certainly that exact information was provided to us as part of the ad hoc working group, in terms of the fact that they could ramp up, but we would be looking at about a 10% to 15% increase and it would not fill the entire capacity, and also it would not be available to Canadians until the end of December. So all of that information was provided to us.

We then, again, looked at the impact that would have on health care, and as we said, we were looking at about 10% of the examinations that we currently do where an immediate answer is required. Without that immediate answer, there may be jeopardy in terms of the person's health or delivery of care, an increased risk in terms of the delivery of care, and another 40% of individuals for whom there would have been a significant impact with an increase in suffering as a result of not being able to access care.

It's always very hard. I have two credentials. I am a general internist and I'm also a nuclear medicine specialist. Up until five years ago, when I left Ottawa, I looked after patients directly. It's always very difficult to connect a diagnostic test or the absence of a diagnostic test with what the eventual outcome is in terms of the patient, because what you're dealing with is narrowing the diagnostic probabilities and trying to improve the outcome for the patient.

The question that we've been asked by the press and by a lot of other people is this. Would people have died? It's a very difficult question to answer. Would people's care have been impacted? Absolutely. Yes. Would the health system have been made less sustainable? I believe yes, it would have been, because it would have had backlogs that we were trying to deal with. Could people have died? Yes, they could have under certain circumstances.

Dr. Thomas Perry: A comment from British Columbia, Mr. Chair?

The Chair: Sure. Go ahead, Dr. Perry, please.

Dr. Thomas Perry: I'm sorry, I didn't catch the name of the member of Parliament who made the comment earlier.

Listening to Dr. Gulenchyn, I'd love to work with her. We would respect each other a lot in practice.

I wouldn't want to leave the impression that British Columbians are not concerned about the rest of the country. After all, I did my rotating internship in Nova Scotia, but I've also worked, at least briefly, in some of the smallest and most remote places in Canada, including some of the most remote sites in British Columbia, and one learns in that that there are various ways to get around a problem.

Also, in a hospital like the one I worked at, at the University of British Columbia, where there isn't much in the way of radiologic services on weekends or nights, one learns alternate ways. I think Dr. Gulenchyn has made that clear, that a relatively small fraction of nuclear medicine studies would be urgent under any circumstances and that nuclear medicines or radioisotopes are seldom used, if ever, for urgent therapy.

From the public perspective, the kind of thing that would reassure Canadians like me, as a hopefully literate, intelligent citizen, would be for your committee to help get the facts out. I was thinking to myself about how one would really know whether Parliament ought to have sat in the middle of the night, or whether that was a very dangerous precedent that threatened the essence of a good working democracy, which is more the way I saw it.

I'm not saying the reactor ought not to have been reopened within a timely way—

● (1240)

Mr. Mike Allen: I have a point of order, Mr. Chair.

Thank you, Doctor. I will say I appreciate your point of view.

I'm going to close with a comment. One of the comments you did make in your testimony was that you would defer to people who are the experts in nuclear medicine, and I believe we have one of those people here. Dr. Gulenchyn provided that testimony. You are completely ignoring the small-market impacts of what happened in some of the smaller centres, and I believe that is very important to the health care of Canadians.

Thank you, Mr. Chair.

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

Go ahead, Dr. Perry.

Dr. Thomas Perry: Far from it, sir. I think one would like to know the truth about that.

It would be very reassuring to me to learn, for example, that there were small-market impacts that were seriously threatening patients. If that were true, I could better understand why Parliament might have acted in the middle of the night. Being a strong advocate of freedom of information and someone who worked very strongly in my own parliamentary career here to get freedom of information in British Columbia, I think one answer to that would be to see the cabinet briefing documents prepared by the Privy Council Office. If your committee could see those...I can't see a reason, as a Canadian citizen, that those ought not to be made public. There is no matter of national security at stake.

If one saw that the briefing notes explained to the Prime Minister's Office and to the leaders of the opposition parties that there was truly a crisis, this would be reassuring to people like me, just as Canadian citizens. That's the only reason I'm really here today. I'm a Canadian citizen, and I have enough respect for Parliament and parliaments, in general, to take the time out of my day to contribute the little insight I have.

I don't think I disagree very much with Dr. Gulenchyn, from what I've heard.

The Chair: Thank you, Dr. Perry.

Parliament actually didn't meet in the middle of the night, just for clarification. We meet in the evenings now and again. In fact, towards the end of a session, it's quite common, and we were finished before midnight, so it really wasn't all that unusual. The type of hearing we had was a bit unusual.

To Mr. Alghabra, for five minutes.

Mr. Omar Alghabra: Thank you, Mr. Chair.

By the way, that was also around the same time Ms. Keen was fired, just so everybody knows.

Dr. Perry, I don't want you to feel that you're being ignored—because your testimony is very compelling—and I don't think we have many questions for you, but I just wanted to thank you for being here today.

Dr. Thomas Perry: There wasn't that much to say. Thank you for the opportunity.

Mr. Omar Alghabra: You had a lot to say and it was very compelling.

My question is to Mr. McGee.

Mr. McGee, you mentioned the revenue is roughly about $30 million for the isotopes. What percentage is that, again roughly, of the revenue stream for Chalk River?

Mr. Brian McGee: In terms of the total operations of the site—so think of revenue in that respect—it's over a $300 million operation.

Mr. Omar Alghabra: So it's close to 10%.

Mr. Brian McGee: It would be less than 10%. We can provide the committee with detailed information. We're pleased to do that, but it's over $300 million to operate the site.

Mr. Omar Alghabra: Thank you.

My next question is to Dr. Gulenchyn. Are there any unique characteristics about the isotopes produced by Chalk River, or can any of the other international suppliers provide you with adequate material that would perform the same tests?

Dr. Karen Gulenchyn: Medical radiopharmaceuticals are in fact drugs that are assessed by Health Canada. So any supplier would have to submit a file that would identify both the safety and efficacy of the product that they were putting on to the market. Once approved by Health Canada, physicians in the country have the assurance of Health Canada that the product is both safe and efficacious and can be used.

Mr. Omar Alghabra: Were other products approved by Health Canada?

Dr. Karen Gulenchyn: There were alternative generators that have been approved by Health Canada. The difficulty was that the company was not able to supply the entire market.

● (1245)

Mr. Omar Alghabra: Which company was not able to supply the entire market?

Dr. Karen Gulenchyn: I believe there are two major generator manufacturers. One of them is Bristol-Myers Squibb and the other one is Covidien. My understanding was that there were insufficient numbers of generators coming into the country in order to supply the market. That certainly was what we were experiencing.

Mr. Omar Alghabra: Where did you get that understanding from? Who supplied you with that information? Who told you that they couldn't supply the entire market?

Dr. Karen Gulenchyn: More global information was coming to us through the Health Canada ad hoc committee, in terms of what they were able to supply.

On the ground, had our central radiopharmacy been able to access more generators, then they certainly would have done so and would have been able to supply us with more product. We were short product for the entire time of this shortage.

Mr. Omar Alghabra: Did you read the report that was done by the *Canadian Medical Association Journal* entitled, "Canada's Nuclear Fallout", which talks about the availability of alternate supplies, and that the other manufacturers felt they were not really consulted and that they could actually provide supply that would be enough to cover the shortage?

Dr. Karen Gulenchyn: This is the piece that was published by the CMAJ just this week? Is that correct?

Mr. Omar Alghabra: That's correct.

Dr. Karen Gulenchyn: I was provided with it this morning by the CMA and I have reviewed it. I think what is important to understand is that given adequate notice, given the time to ramp up supply and bring the material into the country, then yes, they could have presumably done so. But in the situation we were in, in December, they could not have possibly met the needs of the country.

Mr. Omar Alghabra: I agree. So you bring up the issue of adequate notice and you also—

Dr. Karen Gulenchyn: I actually bring up the issue of planning.

Mr. Omar Alghabra: Planning. That's an even better word. You also talked about the fact that there was no formal channel of information with Health Canada and that in fact you took the initiative to contact Health Canada.

Dr. Karen Gulenchyn: We contacted Health Canada on a separate issue, and that was implementing the supply of sodium fluoride for bone scanning.

Mr. Omar Alghabra: All right.

You talked about inadequate planning. Who, in your opinion, should have been responsible for planning?

Dr. Karen Gulenchyn: I think the community has learned a lot from this event. I believe it is the responsibility...I guess maybe of all of us. We need to be able to assure ourselves that there is security of supply. That is why we are anxious to move forward with Health Canada and the other parties concerned to look at this event, look at what we need to learn from it, and ensure that it doesn't happen again. I don't think right now that we can point our finger at one person and say that person should have been responsible for security of supply—

Mr. Omar Alghabra: I'm not even talking about a person. I'm not asking for a name.

Dr. Karen Gulenchyn: —or a company.

Mr. Omar Alghabra: I'm asking for an entity. Who should have been responsible or should be? And do we have a plan right now?

Let's bring it back to what we were trying to accomplish, which is to avoid having this issue surface again. Who should have been planning, and do we have a plan right now?

Dr. Karen Gulenchyn: I believe we have a plan to work towards a plan at the moment. I think it would be disingenuous for me to say we have everything covered and are all ready to go, and that tomorrow, if Chalk River shut down, we wouldn't be back to where we started from. We would be there again.

It may be that some of the European manufacturers have ramped up a bit and could fill a little more of the hole, and it wouldn't be 15% but it might be 30% or 35%.

Do we have a plan to ensure that the generator manufacturers have an uninterrupted supply of molybdenum, which is what they require to ensure that we then have an uninterrupted supply of generators? No, we do not. We will be working towards that plan.

The Chair: Thank you, Ms. Gulenchyn.

Thank you, Mr. Alghabra.

We'll go now to the government side, to Mr. Anderson, for five minutes.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): Thank you, Mr. Chair.

I should ask Mr. Alghabra if he can confirm that he actually wrote those questions himself. I see he was using his BlackBerry, and we're hoping he wasn't getting them from somewhere else.

Mr. Omar Alghabra: They're off the top of my head, which is something you're not used to, David.

Voices: Oh, oh!

● (1250)

Mr. David Anderson: Ms. Gulenchyn, I'd like to come back to the fact that health impacts were already taking place by the time Parliament acted, in spite of what Mr. Perry wants us to believe.

I should also point out that Mr. Perry hasn't been entirely clear on whom he represents. He was an NDP cabinet minister in British Columbia for three years, I think, in the 1990s. I would suspect he's here for more than just his respect for Parliament, as he said.

We have a story in the *Hamilton Spectator* from December 13. It said:

> The four city hospitals that perform imaging procedures—McMaster, Henderson, Hamilton General and St. Joseph's Healthcare—see about 60 patients a day.
>
> When the shortage hit, that had dropped to 12 patients already.

You've talked a bit about the other 48 cases. Some of them would not have involved essential treatments, but it is clear that there was an impact. It was already taking place. People can't say it wasn't. We were getting anecdotal evidence of nuclear health care people being sent home because they didn't have access to the materials.

Can you comment on that a bit further?

Dr. Karen Gulenchyn: Yes, those were my numbers, and that was me in the paper. I underestimated the number of procedures we were doing across those four hospitals. It was actually 90 procedures that we were doing a week.

In that first week, we did drop down to that number of 12. Fortunately, due to the tremendous efforts of my staff and also of our central radiopharmacy, we were able to bump that up and do a bit better in the second and third weeks of the crisis. We ended up doing about 40% to 50% of our workload, which was about what the rest of the centres who had access to product were doing.

I believe that by triaging we did all the tests we absolutely had to do. I think we got them all done in Hamilton. But I know that other centres literally shut their doors, and there were tests that didn't get done. There were patients who required lung scans for the diagnosis of pulmonary embolism where there was not access to CT services, and those studies didn't get done. I have not heard that those patients suffered any harm as a result of that.

Again, taking a step back to the diagnostic process, which begins with a patient complaint followed by a history and a physical and a good physician assessing what the risks and probabilities are, people make decisions in the absence of diagnostic tests. They don't just stand there and say, "I'm not going to do anything." They treat people with the best ability they have.

To the best of my knowledge, I am not aware of any patient who actually died or suffered a serious event as a result of this crisis, because I think we were managing reasonably well up until the time Parliament acted and the reactor was turned back on.

Can I say for certain that didn't happen to anyone across North America? No, I can't say for certain that it didn't happen.

Mr. David Anderson: We did have someone approach us after one of the meetings and make the point that his wife was one of the people affected by that and he felt it had made a huge difference in her health. So there are people who believe that.

Dr. Karen Gulenchyn: I'm sorry to hear that.

Mr. David Anderson: Did you see any projections at all of what the consequences would have been had that reactor not come back online until the second pump was installed, which was just this past weekend?

Dr. Karen Gulenchyn: I didn't see any formal projections of what would happen. We were making estimates as to what would happen based upon the number of generators that were coming in from alternate sources. What we did know is that one of the major suppliers would not be supplying us with anything. That happens to be the one that actually supplies my radiopharmacy with their generators.

We anticipated that unless they could source them from an alternate supply, we would have been completely out of business right across Hamilton by the first week in January. That was why we worked so hard in order to use the cyclotron, which for us was an alternate source of radiopharmaceuticals, to get into place some options for our patients.

Mr. David Anderson: Mr. McGee, I have a question for you.

I understand there's a formal procedure if CNSC is going to move to either regulate or make a decision with regard to one of your facilities. Was that procedure seen through in a proper fashion? I understand there was no particular hearing or anything; there was a decision. You said you were going to extend the shutdown, but then apparently the commission chairman made it clear that if you hadn't, they would have shut you down.

Was there any process that you went through for them to have made that determination?

Mr. Brian McGee: There was no process that we went through. One of our concerns is that we weren't given an opportunity to table our case for why we still were within the licensing basis of the facility.

● (1255)

The Chair: Thank you, Mr. McGee and Mr. Anderson.

We have about five minutes left and four people to question. We're going to have very short questions, and I will hold people to a minute total.

First of all, to Mr. Alghabra.

Mr. Omar Alghabra: Thank you, Mr. Chair.

Dr. Perry, we lost you there for a bit. I don't know if you heard Mr. Anderson's accusation. I think you're next on their list, because now you're considered an NDP appointee.

I want to give you the chance to respond to that, that they're trying to undermine your credibility. Could you please respond to that accusation?

Dr. Thomas Perry: I didn't hear it, but—

Mr. David Anderson: Mr. Chair—

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

Mr. David Anderson: Mr. Perry, to be fair, since Mr. Alghabra didn't seem to understand what I said, I just pointed out that you were an NDP cabinet minister in the B.C. government, and I felt that clearly your reason for being here today wasn't only your concern for Parliament. But I would suspect you have an opinion about this that is related to Ms. Bell and her position as well.

The Chair: Okay, Dr. Perry, go ahead, please.

Dr. Thomas Perry: I'm not familiar with Ms. Bell.

I was very critical of some of my friends in the NDP for voting in Parliament to overrule the Nuclear Safety Commission without asking intelligent questions. The only intelligent question I heard asked in the news coverage of Parliament came from Mr. Ignatieff, of whom I'm not a great fan, but I was impressed by his questioning.

The other day in your committee hearings both the Bloc and the Liberal members seemed to ask the more perceptive questions. I noticed there were some good government questions today as well.

But my interest is more as a citizen, frankly. I was thinking, listening to Dr. Gulenchyn, that really, if you listen carefully to what both of us said.... She's the expert in terms of the use of the radionuclides. She and I both have used them diagnostically, and we both would start, as I was doing this morning with my own students and house staff, with the history of the patient and the physical exam. I'm probably different from her in that I've worked in some extremely remote communities where I didn't have access to fancy diagnostics and had to use my head.

But the key interest, the reason I'm so appreciative of the chance to talk with your committee this morning, is that there are multiple apparent crises, and a crisis depends on who's perceiving it. For example, a former Liberal Minister of Health bought hundreds of millions of dollars worth of a drug called oseltamivir, or Tamiflu, against avian flu. I think that was almost certainly a gigantic waste of money.

Listening to the man from AECL today, I thought, gee, $10 million of that could have apparently fixed the reactor problems at AECL if they were “underfunded”.

What I would like to see from my Parliament and MPs of all parties are scrupulous, intelligent questions, using their staff who are trained to ask hard questions, and try to get to the facts.

I'm hoping your committee will, at the end of the day, allow me to learn whether there really was a crisis or whether there was a manageable situation that was being well-managed by people like Dr. Gulenchyn and whether there are lessons we can learn in the future.

The Chair: Thank you, Dr. Perry. I have to cut you off. We have three other questioners. They'll have to be brief indeed.

Next we'll go to Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Thank you very much, Mr. Chairman.

Mr. McGee, I hope you realize that today's meeting has done little to reassure Quebeckers and Canadians. Our concerns have not by any means been put to rest when we see the kinds of organizational and communications problems that are prevalent in health-related areas.

You issued a press release in February 2006 announcing that MAPLE 1 would go on line in October 2008. Yet, according to some sources, the MAPLE reactors are not operational and never will be. Can you confirm to our committee that there is no truth whatsoever to these reports?

[*English*]

Mr. Brian McGee: Thank you for the question.

As I mentioned earlier, the MAPLE reactors are awaiting approval from the CNSC to do what we're calling the “400 series” testing. That's intended to identify the contributors to the positive power coefficient of reactivity. We believe, based on our analysis and the work done to this point, that those tests will show us what is causing the positive coefficient of reactivity. Following that, we'll undertake to correct it.

The Chair: Thank you, Mr. McGee.

We'll go now to Ms. Bell, for one question, please.

Ms. Catherine Bell: Thank you.

What I've heard from all the witnesses today is that there was a breakdown in communications at many different levels. That is something I've been trying to get to the heart of from the beginning of this. We heard from Ms. Gulenchyn that the clear and timely information was not provided, and from Mr. Edwards that Parliament didn't have all the information to make a decision when we met in Parliament.

Ms. Gulenchyn, you were part of the group of experts. I just wonder why you were not in Parliament on that night to inform us there. But also, when I find that the Minister of NRCan got an email from AECL on November 22 saying that the shutdown would be extended and that was the first email to alert us to this, when we know that isotope production is such a critical thing for medicine in Canada, why was nothing started at that point?

I'm really concerned that we didn't have all the information in Parliament. I would like to hear from each of you a little bit more on that, knowing back then, on November 22, that if we had started the process then, whether we would have been in the predicament we're in today.

● (1300)

The Chair: Thank you, Ms. Bell. That will wrap things up.

To all members of the committee, thank you very much for your questions.

Thank you to the witnesses. I appreciate very much your responses to the questions today. Well done.

Just for the committee, looking forward, we had invited the deputy minister, along with other witnesses, to come on Thursday. She can't come on Thursday. She has volunteered to come next Tuesday.

The committee had agreed, of course, to start the forestry study next Tuesday, and we should be inviting witnesses for that. We have the choice of starting the softwood lumber study or having the deputy minister on Tuesday.

What could be done, of course, is that the deputy minister could be here for an hour on forestry, following an hour on the nuclear study that we're carrying out now. Would that be an appropriate way to go, or do you want to go straight to forestry?

I think there is agreement, then, to go ahead and have her for an hour on each issue. Of course, we come back on Thursday to continue with this study.

Seeing no further interventions, the meeting is adjourned.

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