Canadian Nuclear Safety Commission

Commission canadienne de sûreté nucléaire

Public meeting

Réunion publique

December 17th, 2014

Le 17 décembre 2014

Public Hearing Room
14th floor
280 Slater Street
Ottawa, Ontario

Salle des audiences publiques
14e étage
280, rue Slater
Ottawa (Ontario)

Commission Members present

Dr. Michael Binder
Mr. Dan Tolgyesi
Dr. Sandy McEwan
Ms Rumina Velshi
Mr. André Harvey

Commissaires présents

M. Michael Binder
M. Dan Tolgyesi
Dr Sandy McEwan
Mme Rumina Velshi
M. André Harvey

Secretary:

Mr. Marc Leblanc

Secrétaire:

M. Marc Leblanc

General Counsel:

Ms Lisa Thiele

Avocate générale :

Me Lisa Thiele

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Ottawa, Ontario / Ottawa (Ontario)

--- Upon commencing on Wednesday, December 17, 2014
at 1:32 p.m. / La réunion débute le mercredi
17 décembre 2014 à 13 h 32

CMD 14-M75

Opening Remarks

M. LEBLANC : Bonjour, Mesdames et Messieurs. Bienvenue à la réunion publique de la Commission canadienne de sûreté nucléaire.

We have simultaneous translation this afternoon. Please keep the pace of speech relatively slow so that the translators have a chance to keep up.

Des appareils de traduction sont disponibles à la réception. La version française est au poste 2 and the English version is on channel 1.

Please identify yourself before speaking so that the transcripts are as complete and clear as possible.

La transcription sera disponible sur le site Web de la Commission dès la semaine prochaine.

I would also like to note that this proceeding is being video webcast live and that archives of these proceedings will be available on our website for a

three-month period after the closure of the proceedings.

Please silence your cell phones and other electronic devices.

Monsieur Binder, président et premier dirigeant de la CCSN, va présider la réunion publique d'aujourd'hui.

President Binder...?

LE PRÉSIDENT : Merci, Marc.

Good afternoon and welcome to the meeting of the Canadian Nuclear Safety Commission.

Mon nom est Michael Binder. Je suis le président de la Commission canadienne de sûreté nucléaire.

Je vous souhaite la bienvenue and welcome to all of you joining us via the webcast.

I would like to introduce the Members of the Commission.

On my right is Monsieur Dan Tolgyesi;

On my left are Dr. Sandy McEwan, Ms Rumina Velshi and Monsieur André Harvey.

We have heard from our Secretary Marc Leblanc.

We also have Ms Lisa Thiele, Acting Senior General Counsel to the Commission, with us here today.

MR. LEBLANC: The *Nuclear Safety and Control Act* authorizes the Commission to hold meetings for

the conduct of its business.

Please refer to the updated agenda published on December 16th for the complete list of items to be presented today and tomorrow.

In addition to the written documents that have been reviewed by the Commission for this meeting, CNSC staff will have an opportunity to make presentations and Commission Members will be afforded an opportunity to ask questions on the items before us.

We also have several licensees who will be making presentations today.

Mr. President.

CMD 14-M76.B

Adoption of Agenda

THE PRESIDENT: Okay, with this information, I would like to call for the adoption of the agenda by the Commission Members, as outlined in CMD 14-M76.B.

Do we have concurrence?

So, for the record, the agenda is adopted.

CMD 14-M82

Approval of Minutes of Commission Meeting

held November 5, 2014

THE PRESIDENT: I would like now to call for the approval of the Minutes of the Commission Meeting held on November the 5th, 2014. The Minutes are outlined in CMD 14-M82.

Any comments, additions, deletions?

Okay, I note that there are no changes. Therefore, I would like to ask for the adoption of the Minutes.

For the record, the Minutes are approved.

CMD 14-M77

Status Report on Power Reactors

THE PRESIDENT: The first item for today is the Status Report on Power Reactors, which is under CMD 14-M77.

I understand that we have NB Power. Mr. Thompson is joining us via teleconference.

Just to test the technology, Mr. Thompson, can you hear us?

MR. THOMPSON: Yes, we can. Thank you

very much.

THE PRESIDENT: Thank you.

And I understand Mr. Rzentkowski will make the presentation.

Please proceed.

DR. RZENTKOWSKI: Thank you very much.

It is just an update to the Status Report which was presented to the Commission, CMD 14-M77.

First of all, good afternoon, Mr. President and Members of the Commission.

I would like to update the Commission on this Status Report since this was submitted on December 15, 2014.

There is an update to section 1.3, Darlington.

Unit 4 was manually shut down on December 3, 2014, in order to replace a leaking valve gasket in the primary heat transport system. The unit was restarted and is now at full power operation.

There is also an update to section 1.4, Gentilly-2.

Le personnel de la CCSN désire préciser que l'assèchement du modérateur, en cours depuis plusieurs semaines, est maintenant terminé.

There is also an update to section 1.5,

Pickering.

Unit 6 was manually shut down on November 30, 2014, in order to repair a leaking pump seal and a valve of the shutdown cooling system. The unit was restarted and is currently approaching full power operation.

I would like to clarify that the heat transport leakage rate to collection indicated as a shutdown limit is an internal OPG limit. This is not a regulatory limit which we reported in this Status Report.

Lastly, there is an update to section 1.6, Point Lepreau.

On December 16, 2014, the CNSC Executive Vice-President and Chief Regulatory Operations Officer approved the removal of the Point Lepreau Generating Station continued operation hold point. This approval was granted pursuant to licence condition 16.4 of the Point Lepreau Generating Station Operating Licence. This regulatory hold point required New Brunswick Power to implement several upgrades to its fire protection program before the end of 2014 in order to comply with the requirements of CSA Standard N293-07 entitled "Fire protection for CANDU nuclear power plants." CNSC staff conducted extensive compliance verification activities to confirm New Brunswick Power meets all the requirements of

this standard. New Brunswick Power staff is connected to provide any additional details.

This concludes the Status Report on Power Reactors. CNSC staff are now available to answer any questions the Commission Members may have. Thank you very much.

THE PRESIDENT: Thank you.

I would like to start the question session with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

A question on Darlington and I'm not sure whether it's staff or OPG who can answer this but this is with the Unit 4 manual shutdown.

If the limit has not -- the shutdown limit has not been approached, and I understand the need to be proactive and conservative, why would you have a limit or why would you take that proactive measure?

I see there's no one here from Darlington, so perhaps staff can answer and then we can see if OPG has anything to add to it.

DR. RZENTKOWSKI: Thank you very much. I will redirect this question to Mr. François Rinfret, who is the Darlington Regulatory Program Director.

MR. RINFRET: So François Rinfret for the record, Director of Darlington. Thank you, Dr.

Rzentkowski.

Basically there are reasons to shut down. The first is -- the objective was to determine where the leakage was from, which was under an operator entry into the reactor building.

Why take a safe approach? To determine where the leakage is from and also to determine whether this is something that could just continue and remain at a similar type of leakage rate or eventually create or deteriorate into a situation where an operational limit would be reached. So that explains the safe operation of Darlington to repair.

MEMBER VELSHI: Thank you. So had they not done it, they would have approached the limit fairly quickly then in any case?

MR. RINFRET: Well, this is a -- the cause of this leakage is a gasket. So depending on the type of erosion of the gasket or even erosion of the metal surrounding it, it would have simply, I think, trickled to a higher level. It's kind of difficult to predict but there was an internal -- before reaching that limit of 100, OPG also had an intermediate limit of 50 anyways, so they would have reached that one and have proper operational decision-making certainly to shut down the unit.

MEMBER VELSHI: And when the unit was

brought down, was it to replace the leaking gasket, and if so, does it normally take like 13 days or so for doing maintenance like that?

MR. RINFRET: Francois Rinfret again.

I forget whether some other actions were taken in the field but certainly the repair crew worked on replacing the seal but also machining of the surfaces, which at times become like eroded, before putting it back into place. But I agree with you it doesn't sound like a short outage here.

THE PRESIDENT: Can I just piggyback? I'm trying to understand. So theoretically if the leak rate would continue at 18 kilograms per hour, how would it be detected if it didn't reach the 100 kilograms per hour, which is the shutoff?

MR. RINFRET: Francois Rinfret for the record.

Typically, usage -- since that type of leak is condensing or is vaporized into the reactor building areas, the recovery dryers pick up and work a bit harder in order to bring down the humidity level in these rooms. So that's when we -- typically, it's an estimated value which has to be calculated through the proper techniques.

THE PRESIDENT: I'm trying to figure out

if there's another bell or indicator or measure that will cause operators to know that there is a leak before it reaches the 100 kilograms per hour.

MR. RINFRET: Maybe I'll let OPG answer this one.

MR. McGEE: Good afternoon. Brian McGee for the record.

I'm not in a position to talk in great levels of detail about Darlington, but typically, what I can say is they do have level monitoring in the containment structures so they can see the water that's being collected in containment. They can also monitor heat transport storage collection -- or, sorry, storage tank level. So they have several indications that give them an accurate way of calculating the actual leak rate.

If the Commission would like more information, we can arrange to have that provided but my ability to talk about the specifics of Darlington is somewhat limited.

THE PRESIDENT: I just want to make sure that the shutoff, the 100 kilograms, is not the only safety measure that will protect -- you know, that the leak can go forever without being detected. That's all I'm trying to figure out, if there's other mechanisms to detect this leak.

MR. RINFRET: Francois Rinfret for the record.

There are several other parameters that can be used throughout the plant in other systems in order to detect. OPG was aware there was a leak and they were trying to estimate it using many points of measurements instead of an algorithm because at such a low level it is difficult to detect.

But be aware that there are a number of other ways that you can determine that you have a leak and actually many other locations, systems and parameters are tied into detection in order to properly activate from operators and take automatic actions as well as operator actions to safely shut down units if some of these limits are reached.

THE PRESIDENT: Okay. Thank you.

Ms Velshi?

Monsieur Harvey?

MEMBER HARVEY: Just to continue on the same subject.

I just want to know why for Darlington the shutdown limit is 100 kilograms per hour and then for Pickering it's 1500 kilograms per hour. There's quite a difference between both.

MR. RINFRET: Francois Rinfret for the

record.

I can attempt to answer on behalf of Pickering and Darlington.

The 100-kilogram-an-hour limit is a limit that is set to leakage outside of what we call the collection system. So it's still within containment but it's outside of the normal path of collection and return to the system. So it's a tighter limit that has to be achieved.

The 1500 for Pickering is an operational limit that has not much impact or limit with safety but that is -- limits the operator to be able to collect within that seal system back into operation.

DR. RZENTKOWSKI: So if I can add a little bit to that.

There are two different systems. One is an open system and the second is a closed system. So that's why in a closed system you can allow the leakage rate to be significantly higher, because everything is contained and collected.

MEMBER HARVEY: So what you recuperate in the reservoir or something, you just return it, the leak is returned to the --

DR. RZENTKOWSKI: Yes, exactly. You recirculate the leakage back into the system.

MEMBER HARVEY: Which is not the case in the other --

DR. RZENTKOWSKI: Which is not the case with the open system when basically everything evaporates and then goes through the dryers and this is the way, how the vapours are -- this is the way of collecting the leaking heavy water.

MEMBER HARVEY: You mentioned in your presentation that it was an OPG limit and not a licence or -- so is there anything in the licence that touches that point? Is there any limit or restriction?

DR. RZENTKOWSKI: The shutdown limits are operational limits in both cases for the open and closed system. There is no regulatory limit on the leakage rate per se.

MEMBER HARVEY: So as long as the leak is under 100, for example, it could continue to operate as long as they want, to the nearest output?

DR. RZENTKOWSKI: That's correct. But then of course a lot of principles are not going to be fulfilled. It's because the licensee has to operate in a way so that the exposure of the workers is limited, as low as reasonably achievable. If you allow for the leak to continue this is not going to be the case. So that means we will definitely have a very strong regulatory trigger to

request shutdown of the unit.

MEMBER HARVEY: When would you be informed? When would the staff be informed if there is a leak?

DR. RZENTKOWSKI: Our site staff --

MEMBER HARVEY: Let's say under 100.

DR. RZENTKOWSKI: Our site staff attend operational meetings every single morning and those issues are discussed there. So we have real-time knowledge of any leakage in either the heat transport system or a safety supporting system or a process system in general.

MEMBER HARVEY: Just one other question about Bruce. There is a note these Bruce A units operate at a power margin below 92.5 percent of the full power due to the main output transformer and the generator. Has it been like this since the beginning of the operation or is it linked with the aging problems?

DR. RZENTKOWSKI: It hasn't been like that from the beginning. However, the power is limited to 92.5 percent. But the unit operates slightly lower due to the problems with the transformers. I noticed we have a representative from Bruce Power here in the audience, so I believe he is in a better position to respond to this question.

MR. SAUNDERS: Yes, hi. Frank Saunders,

for the record.

Yes, the reactor limit at 92.5 percent is because the Bruce A units were designed to provide steam to the heavy water plant, so the electrical output of Bruce A is not equal to the reactor output. The maximal electrical output is 92.5 percent so the units -- we don't provide steam to heavy water plant anymore. It's not there. So the units only run at 92.5.

The reason they run at slightly less is actually the other way around. We have upgraded a lot of the turbine generators and the generator sets so we don't have to. Some units are running as low as 88 percent and we are at full electrical output. So we don't have to run the units at 90 percent because we are already getting the maximum out. There is one transformer where we are working on the protective circuits a little bit so we are running it slightly lower.

But the reality is we are running less because the system is more efficient than it used to be so you don't need full reactor power to get the full electrical output. That's just upgraded equipment. We replaced all the main transformers at Bruce A now. They are all brand new.

MEMBRE HARVEY : Merci.

THE PRESIDENT: Thank you.

Mr. Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président.

I will go to the Pickering. This mineral oil spill or leak on December 10th, according to this the leak was estimated at 94 litres and the mineral oil entered in the floor drain and through the common service water discharge into Lake Ontario.

Where did this leak occur on the system?

MR. McGEE: Brian McGee, for the record, for Ontario Power Generation.

The leak occurred from a pump that was stationed in our screenhouse in close proximity to the lake. The initial estimate of 94 litres was a conservative estimate, essentially what we believed in the early stages of the leak detection to be a worst case number. It turned out to be true. It was a worst-case number. The actually, as we have done calculations and assessment is actually closer to 30 litres.

So again, the pump was stationed in a screenhouse which is located on our intake water system right close to the lake and the oil progressed into a drain system.

MEMBER TOLGYESI: And you were saying that it is close to the lake. That's what you are saying?

MR. McGEE: Brian McGee, for the record.

Correct. The screenhouse is located basically on our forebay which is our intake water system right at the lake front.

MEMBER TOLGYESI: And there is no collection system for these kind of oil leaks when you are so close to the lake. So there is no collection system which will prevent the oil going through the floor drain right back to the lake?

MR. McGEE: Brian McGee, for the record.

There is no collection system as part of the plant design. What we have done since this leak is put what we call catch containment capability in place, including at this pump and the other screenhouse as well to make sure that we have a temporary catch containment system in place.

MEMBER TOLGYESI: If there is a -- all the leaks close there in this area, are they going -- every leak could go right to the floor drain and go right to Lake Ontario or for other type of leaks do you have some collection system?

MR. McGEE: Brian McGee, for the record.

There is no oil collection system in the case that you are describing to collect oil from a stationary pump. This pump was a portable pump that was

stationed in the screen house and we have put catch containment capability around it now and other similar pumps.

THE PRESIDENT: Just so I understand the engineering here, so what is the capacity of this catch system? In other words, it overflowed over and beyond your catch system; is that correct?

MR. McGEE: Brian McGee, for the record.

The catch containment system was not in place at the time that this pump leaked. It was a Hansen, what we call a Hansen fitting or a quick connect fitting on a hose that leaked. So the pump was not expected to leak in the position it was in. It did. There was not a catch containment system in place at the time of the leak that we have put one in place now.

The capacity of the catch containment system we have in place is more than enough to capture any oil from that pump.

THE PRESIDENT: Okay. So thanks for the clarification here.

Mr. Tolgyesi...?

MEMBER TOLGYESI: So the catch containment becomes a part of a work procedure in the future when you have mobile pumps which you move around?

MR. McGEE: Brian McGee, for the record.

Our investigation isn't fully complete on that so there will be actions that we take out of our investigation. Jumping ahead, it would appear to me that will be one of the conclusions that we come to.

THE PRESIDENT: Okay. I just -- I have only one. I want to hear from Point Lepreau.

Is that the end of doing all the things to comply with the standard on fire?

MR. THOMPSON: So hello. For the record, this is Paul Thompson, Strategic Advisor at Point Lepreau Generating Station.

I am joined here today by Wayne Woodworth, the Fire Safety Manager; Jason Nouwens, the Projects Design Manager; Darrell Sharpe, Projects Advisor and Rick Gauthier, Regulatory Affairs Supervisor.

You will recall that Sean Granville and myself provided the Commission an update in February outlining the overall project that we had underway to ensure compliance with CSA and 293-07 by the end of December.

And we are pleased to announce that we were successful in completing all of the necessary elements to demonstrate compliance with that project. So yes, we are in compliance with the CSA standard currently and also wanted to recognize the significant effort of the CNSC

staff as there was a tremendous amount of submission and material that was submitted and needed to be reviewed and a certain portion of that approved.

There was a lot of work done in a very short period of time and we appreciate that. So in summary, yes, we have submitted all of the necessary elements to demonstrate compliance with the fire standard.

THE PRESIDENT: So CNSC staff, you have reviewed everything and this file is sort of closed as far as -- you know I like closure on some of those projects.

DR. RZENTKOWSKI: Yes, CNSC staff reviewed all the related documents and also verified the installation and -- the installation and performance of the equipment and we have absolutely no reservation. We believe everything was done in accordance with the standards and New Brunswick Power now is in full compliance with that standard. That's the reason why we recommend lifting this hold point.

I would like Mr. Ben Poulet to add to my answer because he can provide more precision. He was the one who was in the field on many occasions and had a chance to look at all the improvements.

MR. POULET: Thank you, Dr. Rzentkowski.

Ben Poulet, for the record.

CNSC staff has been working on this for

over two years now. To put a perspective, this is a project. NB Power Fire Program Improvement Project is in excess of $140,000,000. There are many, many, many changes, including over 50 design modifications. There are hundreds of procedural changes. There is the hiring and training and, if you like, ongoing improvement to the fulltime emergency response team or, if you like, a fire brigade for onsite. There are now permanently onsite two brand-new fire trucks. There is all kinds of equipment and procedures.

The CNSC staff compliance and verification activities included many, many reviews of documentations done here in Ottawa. They included coverage by inspection, visual in the field during the performance of the work to comply, as Dr. Rzentkowski mentioned to ensure the equipment was installed as stated, and also to watch the performance of the staff as they were undergoing training. So we are completely satisfied that NB Power is in compliance with Standard N293-07.

Thank you.

THE PRESIDENT: Thank you. Well, maybe we can get some further good news.

How are we doing on the seismic project? Maybe we will start with CNSC staff.

DR. RZENTKOWSKI: That's a very timely

question because, as a matter of fact, New Brunswick Power has to publish the results of the study by the end of December.

So this was the condition associated with the relicensing decision in 2012. As a matter of fact, I had a chance to review the summary reports and I can confirm that it will be published before the end of December. In terms of finalizing the supporting reports there is still a little bit of work which needs to be done. I don't know exact timelines for publishing the reports, but the summer report, including all results of the assessment would be published in a week from now, approximately.

I know that there is a representative from New Brunswick Power here in the room and I am quite sure he can provide a better answer.

THE PRESIDENT: In the room or on the phone? I think on the phone.

DR. RZENTKOWSKI: In the room. In the room.

MR. THOMPSON: Yes. For the record, it's Paul Thompson, Strategic Advisor for Point Lepreau.

I concur with the information provided by Dr. Rzentkowski. Yes, we will be in a position to post a summary of the results before the end of the year and also

outline additional path forward overall on our overall seismic file.

THE PRESIDENT: Okay, thank you. We will look forward to reading this report.

Any other questions from Members?

Okay, thank you. Thank you very much.

CMD 14-M80

Oral Presentation by CNSC Staff

THE PRESIDENT: The next item on the agenda is the Event Initial Report concerning a leak of heavy water within containment at Unit 7 of Pickering Nuclear Generating Station as outlined in CMD 14-M80.

OPG are here in attendance.

And I understand that some CNSC staff are joining us through teleconference. Can you hear us? CNSC staff?

MR. FINNIGAN: It's Brian Finnigan from Pickering. I can hear you. Thank you.

THE PRESIDENT: Okay, thank you. So Dr. Rzentkowski, the floor is still yours.

DR. RZENTKOWSKI: Thank you very much, Mr. President and Members of the Commission.

As described in the event initial report,

a leak of heavy water occurred at Pickering Unit 7 during a planned maintenance outage while the reactor was shut down. Containment was isolated as per approved procedures to ensure retention of airborne tritium inside the reactor building.

Some very small releases occurred because there was a need to allow some releases from containment to reduce workers doses. This resulted in emissions of airborne tritium which are estimated at 1 millionth of the annual prescribed regulatory limits, so extremely, extremely small.

As a result, there was negligible impact on the public and the environment. The highest estimated dose to an individual worker was 2 milliSieverts, significantly below the regulatory dose of 50 milliSieverts per worker per calendar year.

Further details will be provided in the presentation by OPG. However, as already verified, CNSC staff is available to answer any questions the Commission Members may have. Thank you.

THE PRESIDENT: Before opening the floor for questions, I understand OPG wants to make a little presentation.

Mr. McGee, the floor is yours.

MR. McGEE: Thank you and good afternoon,

Chair Binder, and Members of the Commission.

For the record, my name is Brian McGee and I am the Senior Vice President of Pickering Nuclear.

With me here today, to my immediate right is Mr. Ken Gilbert, Director of Operations and Maintenance, and further to my right, Mr. Kamyar Dehdashtian, Manager, Regulatory Affairs for Pickering Nuclear.

I will ask Mr. Gilbert to make a short presentation, but I would like to start by assuring the Commission that at no time was the safety of the unit, the plant, the workers or the public or the environment at risk during the leak of D20 from Unit 7 moderator system.

Our duty shift manager made a conservative discretionary decision to declare a station emergency to ensure he had access to the resources and the support required to address the leak in a safe event free manner. That decision is consistent with our organizational expectations for safe operation and conservative decision-making.

I will now ask Mr. Gilbert to make a short presentation.

MR. GILBERT: Good afternoon. For the record, my name is Ken Gilbert. I am the Director of Operations and Maintenance for Pickering Nuclear.

As already mentioned by Mr. McGee, the

safety of the unit, the plant, the workers, the public and the environment was never in question at any time during this event at Unit 7 on the monitor leak.

On November 21, 2014 with Pickering Unit 7 in a cold and depressurized state with the reactor safety guarantee and effect, operators noticed the Unit 7 moderator system level falling. Field operators were dispatched to investigate the cause of the alarm and monitor maintenance was suspended and the Unit 7 reactor building ventilation was isolated to prevent tritium emissions to the environment from the unit.

A station emergency was declared to account for all staff and to assemble an emergency response organization to provide additional support to shift crews during the evening if needed. This was a conservative decision by the shift manager. It is based on our emergency preparedness training as it is the most efficient way of assembling and accounting for all staff at one time. All staff members were accounted for and were safe.

The moderator level was stabilized following operational activities such as cycling pump duty and closing some moderator system valves. Moderator level had been reduced by approximately .4 metres. Operations continued performing a number of other activities during the night to ensure that planned configuration and

alignment was fully understood and that water could be added back into the moderator system when it was needed.

All the water from the leak was contained safely inside the Unit 7 reactor building. Initially, it appeared that actions to isolate the moderator pump three resulted in stabilizing moderator level.

Later in our investigation it was concluded that the leakage was more likely the result of a moderator drain valve that had been brushed open by an operator working in tight constraints in the moderator room. Sure our investigation this has become the apparent direct cause of the event.

At this point I would like to show the Commission several slides that showed the physical area of the valve and specifically the valve that we believe cause the high inflow to moderator collection. The first slide we show is a schematic of the moderator equipment near the moderator heat exchangers, essentially an overhead view of the equipment.

In Slide 2 we show the actual rate of reduction in the calandria level of the main moderator system during the event. Slide 3 we show the actual rate of reduction of the calandria real level of the moderator system during execution of our troubleshooting plan with Unit 7, Valve 32510, Valve 24 positioned slightly more than

one-quarter turn open. This is consistent with the opening reported by a field operator who believed he brushed the valve. You can see that the rate of reduction in both situations is nearly identical, giving us confidence that we have established the direct cause of the leak from the moderator system.

In Slide 4 you can see the moderator heat exchangers piping the valve area and the congestion from temporary barriers, chain falls and scaffolds required to support outage activities.

In Slide 5 you can see the specific valve and the tight working conditions.

Finally, in Slide 6 you can see a worker in personal radiation protection clothing pointing to the valve. The operator who brushed the valve was similarly protected. The combination of tight working conditions, the ease of movement of the valve and the bulky nature of the personal radiation protective equipment clothing all contributed to brushing the valve and its partial opening.

We are taking position assurance actions to prevent inadvertent movement of these valves prior to Unit 7 restart. These valves are normally located in a room that has locked access during unit operation so similar actions will be taken on future units -- on other units in future outages.

The CNSC were promptly notified of the event and were kept updated throughout the initial event and during our follow-up investigation. Throughout this event plant staff were protected from the radioactivity in the moderator water and the changing radiological conditions. We also confirmed that the reactor shutdown guarantee was valid throughout the event, even though the moderator level parameter did temporarily deviate from the limits provided in the operating documents. We are continuing our investigation of this event to ensure that we maximize the organization all learnings, both from activities that went well and to clearly identify all opportunities for improvement.

In closing, I would like to mention some of the key highlights from the response of operating staff to this event:

Conservative actions by shift crews minimized the hazards.

Operating staff followed procedures and acted conservatively in dealing with the event and performing notifications.

In addition, appropriate actions were taken to minimize potential for environmental releases and actual airborne emissions were maintained well below any regulatory or plant action levels.

The crews backed out twice over the weekend when they encountered unexpected conditions inside the building and in both cases the opportunity to re-plan the activity resulted in a better outcome.

All workers' radiation exposures were planned and kept to levels consistent with normal activities.

At this point I will turn it back over to Mr. McGee for his closing comments.

MR. McGEE: Thank you, Ken. Brian McGee, for the record.

In closing, I will reaffirm to the Commission that this event was managed by the operating staff in a manner that ensure the safety of the unit, the plant, the workers and the public were never in question.

The staff took conservative decisions throughout and followed operating procedures carefully. I would be pleased to answer any questions the Commission may have.

THE PRESIDENT: Okay, thank you. Let me start with Dr. McEwan.

MEMBER McEWAN: Thank you, Mr. President.

As I look at the drawings and the sort of relatively narrow space and the bulky suit, I'm

really surprised that this has never happened before and that you are only now recognizing that this is a potential risk, that you can actually have mechanical brushing, as you described it, of the valve.

MR. McGEE: Brian McGee, for the record.

Over the life of the plan, there's none -- no awareness that this has ever happened before. Can't explain, you know, the specifics of that, but what I can say is that the valve movement moves exceptionally easily and that, you know, was a contributing factor as well.

But you know, beyond that, I can't explain why it hadn't happened before.

MEMBER McEWAN: Are there any broader lessons that can be taken from this for this type of environment, to look at potential future risks in other standing valves like that?

MR. McGEE: Brian McGee, for the record.

What I would say is that our investigation is ongoing. We want to follow our corrective action program process so that we -- it's a systematic way of investigating and identifying the corrective actions that we need to prevent recurrence.

As an interim action on this unit, we are locking the valves in position. And so then, following our corrective action process, we'll determine what the right thing to do in the long term on other units. But we are locking the valves before we restart this unit.

THE PRESIDENT: Can I follow up? And forgive my ignorance here.

Anywhere -- any place I went in to see some of those valves, I never was able to open them with the one hand, let alone have to put real force into two.

How credible is it that somebody can just walk by it and brush it and it, all of a sudden, opens up?

MR. McGEE: Brian McGee, for the record.

Chair Binder, before this specific and this specific valve, I had the same doubts, frankly. We, in our troubleshooting plan, went in and found the valve could be operated with one finger, and that's not consistent with my operating experience, but it is the state of this valve.

The valve is functional, it operates well, but it just is -- there's a freedom of movement

in this valve and it is credible that it was brushed.

THE PRESIDENT: So is it a design problem? Because normally, you want some torque to put on this thing to operate it, don't you?

MR. McGEE: Brian McGee, for the record.

Each valve has different characteristics, and normally, most of our valves can be operated by hand with a slight force, so this one is a little bit unique and that's one of the reasons why we're locking it in place before we restart the unit.

We'll understand the characteristics of the valve whether this is a general characteristic, and at this point, I would say it probably is not, or whether it's just unique to the freedom of this valve.

THE PRESIDENT: Thank you.

Ms Velshi?

MEMBER VELSHI: Thank you, Mr. President.

First question to staff. How many station emergencies get declared in a year if you look at the last five years, for instance?

MR. LAFRENIÈRE: Ken Lafrenière, for the record.

I would say, based upon experience, probably you get one or two per year. The most station emergencies are really done not because of the emergency perceived, but just to account for staff. That's the main function.

MEMBER VELSHI: Like this one.

MR. LAFRENIÈRE: Ken Lafrenière, for the record.

Yes, I believe that was their main purpose.

MEMBER VELSHI: So this is a very rare event.

When the Commission was notified of this event, it said for further information go visit the OPG web site, so it's a question for OPG.

So when I went on the web site, there was hardly any information on the incident. And I went a few days later, and there still was hardly any information and just a concluding comment that no impact on the environment, on the workers or, I guess, on the station.

And even as I look at this event initial report, I find it to be very light on details. For example, it says "all doses were within regulatory limits".

And so my question to both staff and OPG is why the paucity of information? Why is there not more shared?

I understand that information is coming in and there may not be some available, but the fact that there is a conclusion that no emission or no impact on the environment or to workers means you have some information. There was nothing on the quantity of the leak, what the tritium levels were, nothing on dose.

So as we look for more transparency, why is that information not shared more openly?

MR. McGEE: Brian McGee, for the record.

Let me start by saying that beyond the notifications required by the station emergency, we contacted all the community leaders, let them know what was going on, advised them of the situation.

The other thing that we did just purely by coincidence, the first of our annual community information sessions, which was a commitment we made to the Pickering community as part of our last licensing process, we held that within a couple of days of the event.

We made -- opened the discussion in

the presentation phase by describing the event, describing the situation in quite a bit of detail and asked the community members present that if they had any questions, we'd be pleased to answer them. There really weren't any questions.

So Commissioner Velshi, we feel that we've been transparent, but we're always open to further learning. And what I would say is we'll go back and look at the web site and see if there's more information that we could have or should have put on the web site to maintain that transparency.

But I believe our actions have reinforced the transparent nature of how we've dealt with this event.

MEMBER VELSHI: So then maybe it's staff that needs to have a closer look at it, that when they notify the Commission Members, rather than just saying "Go look at the OPG web site", you know, maybe it needs to be augmented with more specifics just as the event initial report, I think, that's been presented today could use -- could be fleshed out a bit more.

So if you could both take that back, I think that would be helpful.

Some specific questions on the event

itself.

THE PRESIDENT: Before you leave this, I think it's an important observation, and we spend a lot of time on refining the regulatory requirement for proactive disclosure. And staff were supposed to have a view about the adequacy of the information being presented and there should have been a dialogue going on to deal with some of the issues.

So I don't know if it was done in this particular case, but the question is very simple.

In your view -- in staff view, is the proactive disclosure and all the detail associated with this have been complied with?

DR. RZENTKOWSKI: Yes, in our view there was complete compliance with the proactive disclosure requirements.

The problem in this case was that the data we received were only preliminary, and that's the reason why, in writing our initial report, we decided to disclose this information in a more qualitative rather quantitative fashion. So we're simply saying, for example, that releases were negligible, but we didn't want to give the numbers because we knew that the numbers may be revised in the future when they are fully confirmed.

So this is the only reason why we didn't provide the exact values.

MEMBER VELSHI: So on that point, this event initial report was issued on December the 10th. The event happened November 21st.

So the one that I was looking at was the dose. By that time, you would have known that the maximum tritium dose was -- I was going to say 200 millirem, but .2 micro curies.

You would have known that, right, at that point?

DR. RZENTKOWSKI: Yes, but as a preliminary number, still not confirmed.

MEMBER VELSHI: So there's quite a difference between below -- I think if you just put the lens of, say, someone like me as a Commission Member on December the 10th -- and this event got a fair bit of media attention. There was just no detail available on -- so how big was it? You know, how big could it have been?

Is 600 litres a lot? Maybe it is. I don't know. Could it have been thousands of litre?

I don't know. I think -- all I'm asking is go back and look and see, could more information be provided rather than having to wait for

a bit longer.

THE PRESIDENT: And if I may jump in, there's nothing wrong with putting preliminary numbers that everybody understands can be revised later on. We do it on practically every data that we collect.

DR. RZENTKOWSKI: I fully understand the concern, and I do realize that the public deserves a full disclosure of information. But in the November Commission meeting, we received other direction from the Commission, write a report as quickly as possible, do it in a very sketchy way, let us know what happened.

And that's precisely why we acted maybe not that promptly because this was two weeks after the event. But because the data was not confirmed, we decided only to inform the Commission of that which we knew with absolute confidence was correct.

MEMBER VELSHI: Yeah. I think the debate here is absolute confidence versus qualifying the data that's being provided, and there's a judgment call on what we provide.

So on the incident itself -- and you mentioned about this valve moving very quickly. So have you investigated these valves in the other units

and are they likely to be open just as readily?

MR. McGEE: Brian McGee, for the record.

These valves, Commissioner Velshi, are located in the main moderator room. It's an access controlled area when units are at power.

What that means is it's locked and it has access control requirements. You just can't go in there.

The radiation fields are substantial at power, so our plan is to investigate as we -- as each unit goes into a future planned outage.

MEMBER VELSHI: So when Unit 6 came down, it wasn't a planned outage, but when you had to manually shut it down, would this be on your to-do list to go and see what the status of those valves are in that unit?

MR. McGEE: Brian McGee, for the record.

At the time that Unit 6 came down, we were still in the investigation phase, and so we had not yet determined the apparent direct cause.

So at -- we did not look at Unit 6. We will be looking at all future planned outages.

MEMBER VELSHI: Thank you.

And when do you expect the full investigation to be completed?

MR. McGEE: Brian McGee, for the record.

The full investigation associated with the Unit 7 event will go through our corrective action process. Typically, from the time that we initiate the investigation process, it's a 42-day investigation. That's what our process calls for.

Some of the investigation -- so I need to clarify. The difference between a root cause or an apparent cause evaluation, which is our corrective action process which will land on all the things we need to do, and some of the things that we've been doing in the early days of the event were shift crew investigations of the situation.

So I'll make the separation between investigation and evaluation; 42 days for the full evaluation.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Thank you.

Mr. Tolgyesi.

MEMBER TOLGYESI: Merci, monsieur le président.

When I look at the picture, this valve

controls what?

MR. McGEE: Brian McGee, for the record.

I'll ask Mr. Ken Gilbert, Director of Operations and Maintenance, to answer that question.

MR. GILBERT: So in order to do maintenance on pieces of equipment in the system, one would isolate the large process valves to that equipment and then open a drain valve to drain the water out, and it would drain to the collection system. And the idea is to maintain the fluid always inside a pipe-tight system.

So this valve would normally be used to drain equipment to the collection tank.

Now, when you isolate large pieces of equipment, you close the valves and drain it down to collection. In this case, the valve -- the piping was not isolated, the large valves were not closed, and the small valve opened to the collection system.

MEMBER TOLGYESI: So when you do this planned shutdown, there should be a kind of lock-out procedure where you say that I opened the valve -- or in this case, it was easy to open, I think. And it was at the far end. At the other end, it was not connected, so that's why it was spilling on the floor?

MR. McGEE: Brian McGee, for the record.

This valve was not part of the isolation required for the work that was going on in the system at the time, and so -- and there was an opening in the system because the maintenance was going on.

So this valve was not part of the guaranteed isolation required for the work that was in progress at the time.

MEMBER TOLGYESI: So when you clean the auxiliary system -- that's what you were doing -- the moderator was going to auxiliary system and spilled on the building -- on the floor. So that means on the bottom of the auxiliary system there is no collecting system which will prevent leakage on the floor and eventually -- eventually to go somewhere.

MR. McGEE: Brian McGee, for the record.

I'm going to ask Mr. Gilbert to expand on my answer, but this was a situation that would not have occurred at power, if the unit was at power and no maintenance was in progress.

The reason that the leak occurred was because we had a component that was disassembled, and

so the leakage flowed from the -- through the valve in question to the collection tank and through the dismantled component.

And I'll ask Mr. Gilbert to expand on that if he chooses.

MR. GILBERT: Ken Gilbert, for the record.

In this case, we had a system open and, as I spoke before, typically, you would close valves and then open a drain valve back to a drain tank.

In some cases, you have to work on the last component before the tank, and we were working on one of those components. And when you do that, you manage the risk by maintaining the tank level below a specific amount.

So if you imagine there's a drain valve that comes down to a tank and I want to work on that valve, when I take it out, safety of the worker and the plant is done by maintaining level in the tank, by what we term an AWPP.

In this case, we have other lines that can run to that tank. The water from this particular valve drained to the same collection tank that the other line also drained to.

As level went up, as I indicated in my presentation, working rights for workers on the valve that we had cut out of the system was suspended, so they were -- you know, they couldn't work in that area any more. The tank continued to raise in level as we investigated and, eventually, the level of the tank was such that the other drain valve, the level got to the point of that drain valve allowed water to come out.

That was how the water got to the floor.

MEMBER TOLGYESI: Does it mean that there should be a procedure of -- lock-out procedure where, you know, you were saying that several sources could feed this tank when you are talking about the last step, last valve.

There is lock-out procedure which is saying that no other -- besides this valve, no other valve or pipe could feed into collecting tank?

So it will be -- the collecting tank will be isolated, I mean, all feed which could lead to collecting tank be closed.

MR. McGEE: Brian McGee, for the record.

This is part of our ongoing

investigation. We'll understand ways we can optimize our approach to maintenance on the system.

Mr. Gilbert mentioned what he called an AWPP, so it's an improved work practice.

There are some situations in a power reactor where you cannot get guaranteed isolation state because of the reactor, because needing to maintain cooling to the fuel, for a variety of reasons due to configuration in some cases.

Almost all the maintenance that we do, we are able to guarantee all sources of energy are de-energized and fully drained. Where we can't, we use -- basically, we guarantee conditions.

And in this circumstance, there was -- part of the work protection, there was part of -- there was classic, you know, guaranteed isolation, guaranteed de-energized approaches, but the AWPP that -- referred to by Mr. Gilbert was guaranteeing certain conditions.

We're going to take a look at that as part of our investigation and understand if we -- if there are ways that we can enhance that, but we will have to rely on those type of guarantees of condition, if you want, for some maintenance. And our workers are aware of that.

And we still find ways to make sure that they can work safely.

THE PRESIDENT: Mr. Harvey?

MEMBER HARVEY: Sixty-two hundred (6,200) litres is quite an amount of water. It's six cubic metres or something like that.

So when it's on the ground, what have you done with that? How do you recuperate the water and what type of procedure to manage with that?

MR. McGEE: Brian McGee, for the record.

All water was contained within the reactor building, which is a sealed containment structure. So when -- what we do in that case, using radiation protection methods to protect our workers -- and you've heard that the radiation exposures were kept at low levels.

There are several strengths in the response of the organization, of the crew response to this particular event, starting with the shift manager's response, the conservative decisions that were made, the use of procedures, the conservative decisions made by the operating crew.

When we got into the clean-up phase, that -- those behaviours prevailed.

The radiation protection organization and the operators and support staff that did the clean-up went in, and you heard in Mr. Gilbert's presentation that they backed out two times during the clean-up.

In both cases, they encountered conditions that were inconsistent with their pre-job brief, with what they were -- believed in the pre-job meetings to expect. They backed out.

We regrouped, we replanned and we went back in.

So the clean-up was done. We're in plastic suits similar to the plastic suit that you saw the individual wearing in the last slide that Mr. Gilbert showed. They used clean-up methods, vacuums and a variety of ways that we clean the water up.

And then -- so the residual drying is done by our recovery system, so dryers.

MEMBER HARVEY: And coming back to the staff, do we have any assessment to do after that? We have to visit the room and prove what has been done or it's up to the licensee to control that?

DR. RZENTKOWSKI: Ms Solange Laberge, who is the Acting Director for Pickering regulatory program, will respond to this question.

MS LABERGE: Solange Laberge, for the record.

The CNSC initiated at site -- initiated an inspection. We called it a reactive inspection.

I can give you more detail. We have Brian Finnigan, who's the CNSC site office supervisor, if he can maybe complement what I'm going to say.

So we were very interested to find out where the -- how OPG was treating the situation, so we got information, which is all preliminary, and we conducted an inspection.

The inspection was -- we wanted to finish the inspection prior to finishing our write-up of the event initial report, and that was done.

The period of the investigation -- of the inspection was from the 10th[sic - 28th] to the -- until last -- two weekends ago. And we have findings from the inspection, and we have put some conditions on OPG from this inspection.

We raised an action item, actually.

MEMBER HARVEY: Thank you.

There is another question about the effects, the impact of the event.

You mentioned that how many workers have

been affected -- you mentioned none -- all worker doses were within regulatory limits. Is this to say that as long as a worker is under that, that he hasn't been affected? If you are just close to the limits you are not affected; if you are a little bit over you are affected?

To me, to just present it like this, because I see a worker can be affected but not too much if it is under the limit, but this is not to say that he hasn't been affected. So I don't know how you say it, but just to trace a line and to say none appears, to me, may be not to be correct. I might be wrong. I don't know.

DR. RZENTKOWSKI: At the point of writing the event initial report, we knew already that worker exposure would probably be below 2 milliSieverts. But again, we didn't have the final numbers so that's the reason why we decided to simply use this qualitative term to describe the situation. I think it is a correct term, but of course it is lacking precision of the exact number. And that's what I disclosed today in my update to the status report.

THE PRESIDENT: Anything else?

So let me -- again, I think what we have been dancing around is between the disclosure to the public, the accuracy and the event itself.

So first of all, just factually, I have

never heard what does an alarm in a nuclear power plant sound like. Is it -- I mean is it siren-like? Is it red lights going everywhere? What is it? Is it only visually and can you hear it outside the fence?

MR. McGEE: Chair Binder, Brian McGee, for the record.

I am assuming you are asking about what does the emergency tone sound like?

THE PRESIDENT: Yes. The alarm. It says there was an alarm --

MR. McGEE: Right.

THE PRESIDENT: -- that was triggered and there was some emergency declared and I assume you evacuate the staff, or the employees.

MR. McGEE: Brian McGee, for the record.

So there is a tone, a station emergency tone that is sounded if you are in close proximity to the site. So at the fence line you would hear it. You wouldn't hear it further out than that because it's not that type of situation.

We don't evacuate staff in that situation, but we ask them to assemble. That was one of the primary reasons the shift manager made the discretionary decision to declare a station emergency, was to assemble staff so that he would know the whereabouts of all staff onsite to

make sure that they were all safe.

What we didn't want to have happen in this equation was people going into the reactor building, unknowingly walking into a radiation hazard.

THE PRESIDENT: So where do assemble them?

MR. McGEE: Brian McGee, for the record.

Depending on the work group there are a variety of assembly points in the power plant and in this case it was after normal working hours, but they are assembly locations in the office buildings as well.

THE PRESIDENT: So I'm coming back to the public disclosure. So if this can be heard at the fence -- what I'm reacting is, there was a press announcement or article that said there was an alarm and no evacuation was required. And at the moment the word "evacuation" is being used, people read all kinds of misinformation on it, because when you talk about evacuation it means that it was somebody had to consider whether evacuation was required or not.

All of this in my mind argues for as much information as possible. I don't care how preliminary they are, and that means dosage amount. You know, that would be my expectation because you invoked an emergency situation. You cannot keep it inside the tent, so to speak. Am I making sense?

MR. McGEE: Chair Binder, Brian McGee, for the record.

Yes, you are making sense. I think earlier you heard me say the steps that we went through to be transparent, including with community leaders and with the notifications we did and then with our community information session. But both you and Commissioner Velshi have given us some important feedback that we need to work with in terms of how we handle these situations and improve our transparency.

What I will say to you is we are fully committed to transparency. We work closely with our community partners and the community leaders in the community. We believe that it is important to have that transparency. So your feedback is important to us and we will go and re-evaluate how we handle that part of it.

THE PRESIDENT: Give us a very quick kind of factual information. So there was a lot of heavy water. Do you ever recycle this heavy water? Do you reuse it? What do you do with the thing that you vacuum or you collect? What do you do with it?

MR. McGEE: Brian McGee, for the record.

The water that remained inside the closed collection system that we referred to, was pumped back to the main moderator system of the calandria. Water that we

recovered from outside the collection system is drummed. It is processed through a filter and it is upgraded.

THE PRESIDENT: Okay. Thank you. Anybody else? Well, thank you, thank you very much.

--- Pause

THE PRESIDENT: The next item on the agenda is the Event Initial Report concerning a release of anhydrous hydrogen fluoride (AHF) at the Cameco Corporation's Port Hope Uranium Conversion Facility, as outlined in CMD 14-M83.

I understand there are representatives from Cameco here and they will make a short presentation after the CNSC presentation.

So I understand, Mr. Newland, you will make the presentation. So proceed any time you are ready.

MR. NEWLAND: Dave Newland, for the record.

My suggestion is that Cameco go first. We won't speak to the event itself and I think it Cameco has a good set of slides that will explain the event and then we will explain what actions we took afterwards, if that is acceptable.

THE PRESIDENT: Okay. That sounds good.

CMD 14-M83.1

Oral presentation by Cameco Corporation

THE PRESIDENT: And just for the record, the presentation is outlined in CMD 14-M83.1. I understand Mr. Clark will make the presentation. Please go ahead.

MR. CLARK: Thank you. Good afternoon, President Binder and Members of the Commission.

For the record, I am Dale Clark, Vice President of Cameco's Fuel Services Division.

With me today are Dave Ingalls, General Manager of the Port Hope Conversion Facility and Liam Mooney, Vice President of Safety, Health, Environment and Quality.

We are here today to discuss an incident that occurred at the Conversion Facility on November 26 and outline steps that we have taken to prevent recurrence in the future. I will make some brief opening remarks and then turn it over to Dave Ingalls to discuss the specifics of the event.

Over the past several years Cameco's Fuel Services Division has committed considerable time and energy to strengthening our safety culture and improving our safety performance. This has included benchmarking against other industrial facilities which have demonstrated

outstanding safety performance and looking to identify best practices that could be applied at our operations.

One of the recurring themes that we identified during our visits was that those workplaces with the best safety performance year-over-year placed a high priority on direct employee involvement in safety. This led to the creation of the Conversion Safety Steering Committee, or CSSC, which includes both hourly and staff employees. This committee provides employees with wide latitude to identify issues and recommend solutions.

We have also enhanced our corrective action process through the Cameco Incident Reporting System, or CIRS, which ensures that incidents, including near misses are more visible to the CSSC and are reviewed on a daily basis by the site's corrective action group. While we take recent events seriously, Cameco is confident that we have a strong and improving safety culture and are on the right path to further improve performance.

At this point I will turn it over to Dave Ingalls to discuss the particulars of the November 26th incident.

MR. INGALLS: To provide you with some context, electrolytic cells located in the cell room are used in the uranium hexafluoride or UF6 conversion process to produce fluorine and hydrogen gas from anhydrous

hydrogen fluoride, also referred to as AHF or HF.

As outlined in the CNSC staff EIR, on November 25th operators recognize that cell number 10 in the UF6 plant was not receiving a sufficient supply of HF. Troubleshooting determined that the HF supply line was blocked and a decision was made to take the primary supply line out of service and use a secondary supply line well further maintenance work was conducted.

Consistent with Cameco's control of hazardous energy procedure, the cell in question was locked out, which ensured that all potential sources of hazardous energy were controlled. A cell maintenance operator then disconnected the HF primary feed line from the cell, which is located on the ground floor of the UF6 plant. The HF automatic supply valve was identified as the cause of the issue and the maintenance tradesperson replaced it. The valve, which is shown in the picture on this slide is located on the second floor of the plant.

In accordance with the applicable procedure, the UF6 department lock was put in place at the end of the day on November 25th.

On the following day, the cell room operator was in the process of putting the cell back into service. The operator checked that the valve that had been replaced was installed correctly and that the piping on the

second floor was reconnected. The UF6 department lock was removed and the HF supply line was then put back into service. The operator immediately identified that a release was occurring and closed the valve within approximately six seconds.

In addition, the HF detectors in the room identified a release, shut down the cell room, including HF supply to all cells, sounded and displayed a local area alarm, shut down normal ventilation in the room and started the emergency ventilation. It is estimated that approximately 250 mL of HF was released, all of which was contained within the cell room.

At the time of the release, two employees were in the vicinity. In accordance with their training, they quickly exited from the cell room and reported to their supervisor. The employees then showered and reported to the medical department where they received first-aid treatment as a precaution. Although neither showed any symptoms of exposure, as a further precautionary measure both were transferred to the hospital for observation. A third employee who was working nearby also exited from the cell room immediately after this event, but remained at work until the end of his shift.

At the time of the incident, the employee did not experience any symptoms. The individual began

feeling some skin irritation at home later that evening and went to the hospital. While there he received first-aid treatment as a precaution and did not display any further symptoms. All three employees were released from the hospital that night and reported to work for their next scheduled shift.

Our defence in-depth approach to protecting people and the environment, including engineering controls worked as designed. Immediately after the release, the local area alarms activated and the cell room automatically shut down. The emergency scrubbing system was also activated in the room ventilation system shutdown. These controls resulted in the HF being contained within the cell room with no release to the environment.

Immediately following the event, Cameco voluntarily shut down the UF6 plant operation until an initial investigation was complete. Interim corrective actions put in place and safety standard meetings were held with all UF6 production crews. The investigation into the incident began as soon as the cell room was safe to enter and involved Cameco's previously mentioned employee-led safety committee.

Safety stand-down meetings were used to review this incident in detail with every employee in the

UF6 plant. The importance of conservative decision-making and personal employee accountability was emphasized to each employee. The focus of these meetings was not limited to this particular event, but also included discussion of other recent events.

Cameco notified CNSC staff of this event in a timely manner and also informed the Municipality of Port Hope and posted a summary of the incident on our website.

Our control of hazardous energy, lockout tag out procedure is designed to protect employees while there are working on a equipment by preventing contact with energized sources. A new corporate standard for this was implemented in 2014 at the conversion facility as part of a company-wide five years safety improvement plan.

Broadly, this procedure consists of locks to lock the equipments out and tags that explain the work that is underway. An equipment-specific list is employed to ensure that the equipment is properly locked out and a zero energy state is verified before work begins. While work is underway, personal locks must be in place.

The new standard requires that personal locks be removed from the job at the end of the shift and replaced by a department lock. In this case both cell maintenance and production operators involved in the work

activities on the cell are in the UF6 production department. So a single department lock was applied to the lockbox at the end of the shift.

Our initial investigation found that work on the cell had not been fully completed when the lock was subsequently removed. The HF supply piping had been disconnected at the cell room on the ground floor and was not reconnected prior to restoring HF supply to the cell from the second floor. Consequently, HF was released from the feed line at the cell.

As an interim corrective action we have now provided the cell maintenance group with their own department lock which will ensure that the production operator is aware that cell maintenance work is still in progress. In addition, we have capped and locked the openings on the spare HF lines. This control provides additional oversight prior to these lines being put into service. A root cause investigation is well underway and we expect it to be completed in early 2015.

I will now turn things back to Dale Clark to wrap up the presentation.

MR. CLARK: Thank you, Dave.

As I indicated earlier, Cameco takes incidents very seriously. We are committed to providing a safe workplace for our employees.

Over the past several years, Cameco's Field Services Division has focused significant efforts to enhance our safety culture. This work resulted in tangible positive results with 2013 being the safest year ever at the Port Hope Conversion Facility. However, we have seen an increased frequency of incidents at the facility recently and had begun to initiate a series of actions to address this trend prior to the November 26 event.

In August Cameco made the decision to increase the number of shift supervisors in the UF6 plant which will allow significantly more supervisory time on the floor with employees to ensure our operational expectations are achieved with this increased oversight. The recruitment for these positions was completed in late November and training is underway.

We have also initiated an analysis of recent incidents to determine if there are any common causes that can be identified. In addition, Cameco will be performing a safety culture assessment at the conversion facility during 2015 to further understand and improve our safety culture.

We will continue to develop and communicate our expectations for employee performance as it relates to accountability for actions taken, as well as conservative decision-making.

Cameco is fully committed to addressing recent incidents. As discussed, we have invested considerable time and energy to strengthening our safety culture at the conversion facility over the past several years. As a result of this effort, I am proud to see this reflected in significantly improved safety performance across the division.

Based on our improving safety record, our people and our systems, we are confident that we are on the right path to continue to improve our performance. This includes implementation of the actions we have outlined here today.

In closing, the health and safety of our workers and protection of the environment will always be our highest priorities. Thank you. At this point I would be pleased to answer questions or turn it back to CNSC staff.

THE PRESIDENT: Okay. CNSC staff, do you have any further comments?

CMD 14-M83

Oral presentation by CNSC Staff

MR. NEWLAND: Yes, we do. So good afternoon, Mr. President, and Members of the Commission.

My name is David Newland and I am the Acting Director General of the Directorate of Nuclear Cycle and Facilities Regulation.

With me today, on my left, is Nathalie Riendeau, Acting Director of the Nuclear Processing Facilities Division, the division that provides the regulatory oversight of this particular facility.

This is an early initial report as described in CMD 14-M83 for the information of the Commission Members regarding this event on the 26th of November 2014.

You have heard directly from Cameco the facts around the event itself and so I will speak to the actions taken by staff to date, actions that are ongoing at the present time and future actions.

The Project Officer was notified on November 27th that the event had occurred. CNSC staff immediately initiated a review of the occurrence and the facts available at that time. Given the potential seriousness of the event, staff decided to conduct an onsite inspection to gather primarily further information.

On December the 1st, two CNSC inspectors conducted this onsite visit with the following objectives; to visually assess the areas where the occurrence took place, discuss with Cameco the processes and expectations

for conduct of maintenance and lockout; interview the three affected staff and review the facts of the occurrence with other chemical staff.

On December the 4th, myself and the Director of NPFD met with senior Cameco representatives to again review the events of November 26th and the actions taken by Cameco to date and validate CNSC staff's observations during the site inspection and, further, to discuss CNSC concerns regarding events at the Port Hope Conversion Facility that have occurred over the course of 2014.

In addition, staff are currently conducting a weeklong augmented inspection at the facility to evaluate Cameco's management system processes related to the conduct of maintenance.

Based on the information from the first onsite inspection and other information provided, staff conclude that Cameco has taken appropriate and timely actions specific to this particular event. That being said, staff do have some residual concerns regarding the number of events that have occurred at the facility in 2014. We do note that Cameco recognizes this and is undertaking broader self- assessments to identify further corrective actions.

Going forward, CNSC staff are considering

further compliance activities and these will be dependent on the outcome of the most recent inspection and on the review of Cameco's root cause and common cause analyses.

Thank you, and staff are available to answer any questions the Commission may have.

THE PRESIDENT: Okay, thank you.

Let's start with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

Both Cameco and staff have spoken about this disturbing trend of a lot more incidences this year compared to historical performance and, yet, there is no detail provided on that. So even as I look at Slide 9, it just shows LTI frequency, great trend and I'm not quite sure what TRIR performance is, but again that doesn't show 2014 in here.

So tell me a bit more about what this disturbing trend is, the nature of events and how does that compare from previous years and why is more detail not provided in either of the CMDs?

MR. CLARK: Dale Clark, for the record. I can respond, initially at least.

The reference there is probably in particular to this being the second appearance on an early information report. In 2014 we had an event that we were detailing and describing the outcomes of and the corrective

actions from earlier this year. There have been other lesser significant events that have been reported and responded to throughout 2014. But what I would say is we made the effort here to provide the context and the longer term view and the bigger picture view there for a moment.

First of all, we have what I would say is a very strong leadership team onsite and one that is very passionately committed to safety culture and improving -- continuing to improve the safety culture onsite.

As a former general manager of the facility I understand some of the challenges that go with that and Mr. Ingalls here beside me with extensive experience in a number of different areas of the plant and a leadership team onsite that we are very proud of and has extensive experience with. They truly invest a significant amount of effort into that safety culture area and focused on improvements in that area. I mention that because we have seen -- over several years as we really focused on that area, we have seen continual improvement, I believe, in that area.

An example of that, just one example, is that 2013 was in fact the safest year ever on that site. Now, there is a number of different ways to look at that, or to measure that, and certainly we recognize we are not perfect. We have still had some events there. We have not

seen exactly a straight line down to zero events.

And so that's why we are still committed. We are committed to learning from these events. We do the investigation. We do a root cause investigation, in this case a common cause investigation into the broader picture of those events to make sure that we are learning from them and that we continue to grow and develop in that safety culture.

But it is an area, frankly, that we are still remain proud of the improvements that we have made. And if you look over a longer term we do see a declining trend and we are committed to making sure that we address that quickly here, as we see a bit of a bump and a potential consequence -- significant consequence event here in 2014.

One last point on that that I would raise, is the fact that these events that were referred to there in this case as well, the defence in-depth approach onsite has worked. It is based on a defence in-depth philosophy and approach to that facility that works to ensure -- first of all, prevent events from occurring, but if not to certainly minimize or mitigate the potential consequences of any events. That is the case, as we saw in incidents from earlier this year and in this event as well. No significant injury to employees, no impact to the

environment, no impact to the community as well, and that is because of that robust comprehensive defence in-depth approach.

So that was meant to provide the broader picture of the safety culture focus of that leadership team and the organization and some of the context of the improvements that we have seen there. That said, we are committed to dealing with this event and others that we have seen in 2014.

MEMBER VELSHI: Thank you. I guess we will see more details in the 2015 annual report on the nature of the events and what has been done.

THE PRESIDENT: Are you going to tell us what TRIR is?

MR. CLARK: Yes, sorry. Dale Clark for the record.

That stands for Total Recordable Injury Rate. That is a metric that Cameco uses today and is commonly used in the industry that we used to refer to lesser significant safety events. So you see also on that slide a measure of LTI or lost time injuries, of which we had zero in 2013, and have operated in that plant for over two years without a lost time injury.

To take that down a level, that is also looking at injuries that may require some type of medical

treatment that is a recordable injury. So that is a number per 100 employees per year.

MEMBER VELSHI: There are 250 mL of AHF. Potentially, how much could have been released?

MR. INGALLS: Dave Ingalls, for the record.

The line that was open, the valve of that the HF flowed through was very small -- has a very small orifice opening on it, so the quantity being released is actually a very slow flow rate. In addition to that, the operator witness then shut the valve immediately. Almost at the exact same time our automatic detection system also indicated the release as well and shut the system down. So the potential for a much larger release is minimal.

MEMBER VELSHI: Okay. And I was curious about the third worker who did not seek first aid immediately and then went home and only when he encountered certain symptoms did he go to the hospital. What would your station procedures call for as what is appropriate action?

MR. INGALLS: Dave Ingalls, for the record.

We rely on our operators and our employees to report when they have had an exposure. In the case of the third employee he was in the room and did detect some

HF, but when he left the room he didn't feel any residual effects. So he didn't feel that he required any additional treatment so he did not report that at the time. Once he was home he started to feel a little bit of tightness, he said, on his skin. So we advised him that he should go to hospital as a precaution.

THE PRESIDENT: I'm sorry, can you share with us what are normal symptoms if you inhale this stuff? And why would you not insist that regardless of how they feel they got to see -- just as a precautionary measure. You don't allow to self- medicate, you don't allow them to self -- whatever they are self-diagnosing?

MR. INGALLS: Yes. Dave Ingalls, for the record.

Some of the symptoms, if you had an inhalation of HF is basically irritation to the airways. So you would feel soreness or irritation or soreness in the chest. On the skin you would feel a burning sensation on the skin.

Our practice is very conservative in terms of sending employees for treatment as a precaution. We do rely on the employees saying that they are displaying some symptom or they had an exposure to HF to administer that treatment. In this case the employee in question didn't indicate that he had smelled or been exposed to HF until

later in that evening.

MEMBER VELSHI: And the first aid that is applied, what is the nature of that?

MR. INGALLS: Dave Ingalls, for the record.

It depends on the exposure route. For the three employees it was different. For the skin exposure it was applying a calcium gluconate gel basically to the skin which ensures that the HF burn is neutralized or the irritation is being neutralized. For an inhalation we give that same formula through a nebulizer. It is basically an aerosol inhalation treatment that we give. The third employee didn't actually experience any symptoms in the cell room. He went for a shower.

He believes he may have got soap in his eye, but he had a sore eye when he reported to the Medical Center. So as a precaution we treated him for an HF treatment to the eye and that involves an irrigation treatment to the eye of that same calcium solution.

THE PRESIDENT: Do you want to go on? Go ahead.

MEMBER McEWAN: So again, I am really surprised that it wouldn't be standard procedure for somebody who could potentially have been exposed to a nontrivial amount of a very unpleasant chemical to actually

require them to be checked. I just find that very surprising.

MR. INGALLS: Dave Ingalls, for the record.

At the time of the incident we weren't aware that he was in that area and was exposed. He didn't self report that. The other aspect in terms of our conservative approach to the treatment, the TLV for HF and the order threshold, there is quite a separation there. You can detect HF at a very -- it's a fraction of the TLV at the level that you can detect HF. So we are very concerned that if an employee reports that they have smelled HF that we do a treatment, even though that will likely indicate they are at a fraction of the HF TLV.

MEMBER McEWAN: That still didn't answer my question.

Why wouldn't you have an SOP for somebody who could potentially be exposed to be checked, independent of whether they feel symptomatic or not? Because I'm guessing low exposure could present with later symptoms rather than earlier symptoms.

MR. INGALLS: Dave Ingalls, for the record.

We do recommend for employees to go to the Medical Center for evaluation. To answer your question, I

think out of this incident there was learning there that we need to confirm with the employees to make sure that we have accounted for everybody that was in that area and if they had potentially had a potential exposure to hydrogen fluoride.

The other aspect we do, do as a follow up as well, in addition to the medical, is we do urinalysis testing as well to ensure that they have not had a significant uptake of fluoride from that as well.

THE PRESIDENT: Okay. Ms Velshi...?

MEMBER VELSHI: No, that's good, because those were all my follow-up questions, your stand-down. The two key messages were conservative decision-making and personal accountability exactly in line with that. I didn't very closely follow what really caused to the incident. It had something to do with locking and tagging and maintenance still going on and showing it as finished, but I'm more interested in knowing what your immediate actions are to prevent something like this.

I know you said maintenance staff now have their own locks to use, but can you elaborate on how are you making sure that this will not happen until your full investigation is complete and you have all your corrective actions in place?

MR. INGALLS: Dave Ingalls, for the

record.

From our initial investigation, the relationship between the two working groups involved in this particular incident, the cell maintenance group and the production operator group, it is a bit of a unique organization all structure in that particular area and it is only in that one area of our facility where both groups are part of the production department. Even though one group is considered or called the cell maintenance group, they are actually part of our production group because they are as a group that is servicing the cells.

In this particular instance our control of hazardous energy standards required that at the end of the workday when the workers had finished doing the actual work on the jobs themselves they apply a department lock on the equipment to say that the work has not been complete. In this case, because the two production groups were working together, the cell maintenance group went up and observed that the production lock was already on the equipment and they felt they didn't need -- there was not a need for them at the time to apply an additional production lock. When our own separate maintenance group does it, it goes through a work order process, they have their own set of locks, so this same sort of confusion would not occur.

To clarify that going forward, we have now

provided the cell maintenance group, which is still in the production department, their own department locks so that when they leave a job not complete at the end of the shift they must apply their own department lock on that lockout box with a tag stating who put it on, the state that the equipment was left on from their perspective and the date, so that if the operator was to go back again there would be a separate lock that they could not remove.

THE PRESIDENT: Okay.

Monsieur Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président.

First of all, I just concur that I am surprised that the worker will decide if he reports or not to the medical department. I mean, when you are working in conditions that you are working with hazardous materials in the chemical industry, I think it should be in a working procedure that everybody who was exposed should go, must go. It is not his choice. It's obligation and your obligation is to ask for that and oblige the employee to go there.

When I observed that there are different locations, the primary and the secondary line with the supply valve which was the issue on the second floor and where the AHF release happened, it was on the first floor.

When I look at these pictures it's a little bit confusing.

I think it would be useful when these things are happening that -- personally I would appreciate a drawing which is a schematic flow sheet, what has happened and where, because for you it's clear because you are there everyday, but for us it is not necessarily, at least for me.

The other one is that what I observed, that there was a lack of -- there was no appropriate lockout procedure. I don't know if you don't have that or it was not applied, but when you are working on two floors it's more complicated to do locks and there is a procedure when you repair, how do you call that, piping or any flow line, it's a gas or liquid or slurry, whatever, there is a procedure, what you should look up first and second and what you would hook up.

And in this case what I think has happened, that the upstream was connected and open, but the downstream was not hooked up yet. So when you open it, that's where it happened. So that means that there should be a procedure which is very strong for lockouts.

It's not only that each department should have his. You were saying that there was one thought he should not put his lock in addition to that because there was another one, but I think that each department should

have their own locks and do them and make sure also that they are distinctive, electricians and mechanics, and I don't know what all the trades are.

So could you comment on this lockout procedure, what was there, what was in force when it happened?

MR. INGALLS: Dave Ingalls, for the record.

I will just maybe walk through our procedure right now that we have for the lockout program. Before we do a lockout we do have what we call an isolation list which describes -- it is essentially the lockout procedure that you are referring to. We refer to it as an isolation list that describes how you go about locking out and de-energizing the system so that it is properly locked out. In this case that was followed. There was an isolation list for isolating the cell for service. That procedure was followed.

Once the isolation list and the work is isolated, the next step is we verify zero state, so we make sure that there is no other potential energy sources there, which was done. At that point we apply the personal locks for the employees that are working on the equipment at the time.

If the work is not complete at the end of

their shift, that procedure is that you don't leave your personal lock on if you are no longer working on the job. So each employee only has one personal lock for the job that they are physically working on. So when they come off that job there is a requirement for them to apply a department lock and state on the tag what work still has to be done in that area.

I agree with your comment that in this case relying on one production lock was not adequate protection and that speaks to the initial corrective action that we have taken as well by providing that work group, the cell maintenance work group, their own department lock. So that at the end of the shift if they are not done their work, they will apply their own group lock or department lock onto that piece of equipment to ensure it is communicated for any future people working on that lockout procedure that there is still work to be done there.

MEMBER TOLGYESI: When you are saying that when he is not any more working on that or the end of the shift, he is removing his lock because he is not working on that there. And if, for any reason, I think that's the danger there, that if you don't apply your lock and the department lock what happens when you are leaving? Usually you are rushing. You remove your lock. You don't necessarily put your department lock and this kind of

omission could lead to the kind of problems that you are facing.

MR. INGALLS: Yes. Dave Ingalls, for the record.

I agree with you there and that was part of the messaging we had with the employees around making conservative decisions, taking the time to think through actions before we do it and being accountable for the actions that they are taking which was the real focus of those safety stand-downs we had with employees.

MEMBER TOLGYESI: Just a question for staff.

This question of reporting everybody who was exposed to a kind of contaminant, is there a regulation which is requesting that every employee who was exposed to contaminants should go to a medical centre?

MS RIENDEAU: Nathalie Riendeau, for the record.

We don't -- in terms of a response, it's through the emergency response, emergency preparedness and emergency response program of the licensee. CNSC staff have expectations for response and one of the -- one of our expectations is that staff -- that controls are established if there is an abnormal occurrence and that staff are accounted for and that there are procedures in terms of

following up on the health and safety of personnel.

So right now, as you have heard, CNSC staff are conducting a follow-up inspection at the facility and that's one of the areas actually that staff will be discussing with Cameco. We are looking forward to some further details from Cameco from that inspection.

THE PRESIDENT: Okay, thank you.

Monsieur Harvey...?

MEMBRE HARVEY : Pas de question, Monsieur le Président.

THE PRESIDENT: Dr. McEwan...?

MEMBER McEWAN: Thank you, Mr. President.

Could I just -- again it is, I think, the lack of the flow diagram of what happens where. If we look at your Slide 5 which shows the cell room, and then in the previous two slides you show the valve and the pipe and the valve which is the location of this, so those would be on separate floors? The pipes would be upstairs and the cells would be downstairs?

MR. INGALLS: Dave Ingalls, for the record.

Yes, the up close pictures of the valves there would be located above the ceiling on the first floor there of the cell room, so they are located on the second floor; correct.

MEMBER MCEWAN: Okay. So when the release occurs, that release occurs in a constrained volume or in a room?

MR. INGALLS: Dave Ingalls, for the record.

When the release occurred it did go into the room at the back of -- when you look at the picture on Slide number 5, that is the front of the cells there.

MEMBER McEWAN: Yes.

MR. INGALLS: So the HF typing goes in the rear of those cells behind them. The release occurred at the back of one of those cells, cell number 10.

MEMBER McEWAN: So the release occurred in the cell room or upstairs?

MR. INGALLS: It occurred downstairs --

MEMBER McEWAN: Downstairs.

MR. INGALLS: -- on the first floor at the back of cell number 10.

MEMBER McEWAN: So that would have -- I mean, presumably a larger release would contaminate the whole room? A small release would contaminate a relatively local area, but with the potential for wider dispersal?

MR. INGALLS: Dave Ingalls, for the record. That is correct.

MEMBER McEWAN: So how many people would

work in that room?

MR. INGALLS: Dave Ingalls, for the record.

It's a variable in that room, the number of people, but generally it's a very low occupancy room. There is one cell room operator, so the cell room operator is limited to one.

In the cell maintenance area typically the most number of people that would be in there would be two.

MEMBER McEWAN: So three people would be unusual?

MR. INGALLS: Three people would -- Dave Ingalls, for the record. Three people generally would be about the maximum occupancy of the room. Again, it would vary depending on the activities occurring in the room at the time.

THE PRESIDENT: But can any of this gas flow into the second floor?

MR. INGALLS: Dave Ingalls, for the record.

Yes. The first and second floors are open to each other, but it's the same personnel that would be working between those two floors.

THE PRESIDENT: So when you say two or three, it's both for this, for the first floor and the

second floor total?

MR. INGALLS: Dave Ingalls, for the record.

That is correct. In fact, the room is also split in half lengthwise as well, so if you look again at the picture on Slide number 5 there, at the end of the room there you will see a roll-up door. That goes into the other half of the cell room as well. So the room is split in half as well.

MEMBER McEWAN: So again, I am coming back to -- because you said, I think, that you didn't realize there were three people in the room at the time of the leak. You only thought there were two.

MR. INGALLS: Dave Ingalls for the record.

At the initial time of the event my understanding was that only two employees reported that they were in the room at the time.

MEMBER McEWAN: So again I come back to this (a) requirement that I think should be there for mandatory checking of people who have been exposed, but so you as an organization have no perspective checking mechanism or retrospective way of going back and saying how many people were actually in the room unless they self-report?

MR. INGALLS: Dave Ingalls, for the

record.

That is our current process. I would say that will be investigated as part of the root cause investigation, that that is part of that investigation as well and there would likely be some recommendations coming out from the root cause investigation as well.

I don't want to prejudge what is coming out of that investigation until it is complete.

THE PRESIDENT: Any other?

Okay, just a very quick question on -- you mentioned that you increased the number of supervisors. I'm trying to understand what does it mean. How many? Are they employees or experienced people? Presumably you want to deal with some increased supervisory functions. Is that what's behind this?

MR. INGALLS: Dave Ingalls, for the record. When we were increasing the amount of supervision in the UF6 it's to ensure that our supervisors have time to provide the oversight and provide the required expectations for the employees working within the plant. Our current complement of shift supervisors is we had one shift supervisor dedicated to each crew. We have four shift crews.

Going forward we have added an additional supervisor onto each crew. So we have gone from one

dedicated supervisor per crew to two supervisors dedicated per crew and those are actually recruited from internally from experienced operators that have now become supervisors.

THE PRESIDENT: So when you went public with this thing, did you get any reaction from the community? This Port Hope community has a long history about watching you and everybody else.

MR. INGALLS: Dave Ingalls, for the record.

As far as I am aware we have not received any public inquiries related to this event.

THE PRESIDENT: Okay. Thank you.

Very quick. We have to move on.

MEMBER TOLGYESI: Yes. You were saying that an employee closed the valve when he found out there is a leak; am I right? And when he closed that immediately the automatic valve closed also. Where was he located? Where is that valve which he closed, on the second floor?

MR. INGALLS: Dave Ingalls, for the record.

Yes. He was located on the second floor. So part of his check was once he turned the HF on he wanted to verify that the system was okay. So a few steps away from where that picture is taken, there is open floor

grading that you can look down onto the first floor area. And when he looked down onto the first floor area he could see some HF coming out of the pipe on the first floor there.

MEMBER TOLGYESI: That was my question. How did he realize -- he was on the second floor -- that on the first floor there is a leak, and a very small leak? But you said it's the colour of the AHF which is different, so that's why he saw that?

MR. INGALLS: Dave Ingalls, for the record.

Right at the release point itself it looks like a white haze coming out of the end of the pipe, which is what the operator witnessed.

THE PRESIDENT: Okay, thank you.

We are a bit behind schedule. We will take a 10 minutes break and we will resume with Hydro-Québec. Okay. Thank you.

--- Upon recessing at 3:30 p.m. /
Suspension à 15 h 30
--- Upon resuming at 3:44 p.m. /
Reprise à 15 h 44

LE PRÉSIDENT : Le prochain sujet est une

présentation par Hydro-Québec au sujet des activités liées à la fermeture de la centrale nucléaire de Gentilly-2, tel qu'énoncé dans le document CMD 14-M78.

Alors, Madame Pelletier, vous avez la parole. Bienvenue.

CMD 14-M78

Exposé oral par Hydro-Québec

MME PELLETIER : Monsieur le Président, Mesdames et Messieurs les Commissaires, bonjour.

Je me nomme Louise Pelletier. Je suis directrice principale, projets de développement et production nucléaire chez Hydro-Québec.

Je suis accompagnée aujourd'hui de monsieur Bernard Poulin, Vice-président, Exploitation des équipements de production, chez Hydro-Québec Production, et de monsieur Mario Désilets, Directeur, Production Nucléaire à Gentilly-2.

Depuis octobre 2012, beaucoup de travail a été accompli. Il y a évidemment toutes les activités liées au déclassement en tant que tel, dont nous ferons d'ailleurs état dans quelques minutes. Toutefois, le contexte de fermeture de la centrale dans lequel nous évoluons requiert un travail tout aussi important en termes

de gestion des ressources humaines.

Le maintien et la disponibilité des ressources requises pour supporter les activités de déclassement sont des aspects importants auxquels Hydro-Québec a porté une attention particulière en déployant des mesures spécifiques.

De plus, dès l'annonce de la fermeture de la centrale par le gouvernement, Hydro-Québec s'est assurée de garder du personnel compétent et qualifié pour mener à bien les activités et procéder au transfert des connaissances lors du départ de certains employés.

La planification et la réduction des effectifs ont toujours été faits en fonction de la charge de travail requise au plan de déclassement. Nous nous assurons de suffire aux besoins en ressources générales ou spécialisées pour la réalisation des différentes activités.

Une nouvelle structure composée d'une soixantaine de personnes, tous des employés provenant de la centrale, prendra la relève à partir du 1er janvier 2015. Cette structure établie par Hydro-Québec, acceptée par les syndicats et présentée au personnel de la CCSN, est pensée en fonction de nos responsabilités de surveillance et de maintien des systèmes.

Un plan de formation détaillé est en vigueur afin d’habiliter le personnel qui demeurera en

place lors de l'atteinte de l'état de stockage sûr et maintenir leurs qualifications de façon à satisfaire aux exigences de la Commission.

Un peu plus de 600 personnes travaillaient à la centrale lors de l'annonce de la fermeture en septembre 2012. De ce nombre, près de 80 pour cent se sont relocalisées dans l'entreprise, ont pris leur retraite ou ont quitté l'entreprise pour un autre employeur.

Depuis le tout début, un plan d'accompagnement a été déployé pour venir en aide aux employés, tant pour les supporter dans leurs efforts de recherche d'emplois ou de relocalisation que pour les soutenir au niveau psychologique.

Un projet de l'envergure de celui du déclassement de Gentilly-2 requiert la mobilisation du personnel. Aussi, il était primordial pour nous de maintenir un bon climat de travail et de bonnes relations avec les syndicats.

Nous avons organisé, sur une base régulière, des rencontres d'information avec les différentes équipes de travail, conformément à notre plan de communication interne.

Nos indicateurs suggèrent que nos employés sont demeurés concentrés sur les bonnes manières de faire et sur les processus, minimisant ainsi le risque

d’incidents.

Nous avons également appuyé nos relations de travail sur des communications soutenues et bidirectionnelles avec les syndicats. Cette collaboration significative des représentants syndicaux a notamment permis de convenir de plusieurs lettres d’entente, de mettre en place la structure permanente, de relocaliser plusieurs employés et de régler nombreux griefs.

Nous avons aussi pris soin de maintenir de bonnes relations avec nos partenaires du milieu. Depuis l’annonce de la fermeture de la centrale nucléaire, Hydro-Québec a maintenu un canal ouvert avec les municipalités limitrophes, soit Bécancour, Champlain et Trois-Rivières, de même qu’avec le conseil des Abénakis de Wôlinak. En effet, des rencontres annuelles ou ponctuelles ont lieu avec chacun de ces partenaires ainsi qu'avec tout autre intervenant du milieu qui porte un intérêt envers nos activités.

Au cours de la prochaine période, soit de 2015 à 2020, le renouvellement de notre permis est notamment prévu en 2016. Les discussions sont déjà entamées avec le personnel de la Commission. Des rencontres régulières sont planifiées entre le personnel d’Hydro-Québec et de la CCSN afin de faire le suivi des actions et de s’assurer que les travaux avancent de part et

d’autre pour respecter les échéanciers.

En conclusion, je tiens à souligner que chacune de nos actions a été et continue d’être réalisée avec la même rigueur et le même professionnalisme qui a toujours caractérisé le travail de nos employés.

Je laisse maintenant à Mario Désilets le soin de vous détailler les activités de déclassement qui ont été réalisées au cours des deux dernières années et de vous expliquer celles à venir au cours de la prochaine période de 2015 à 2020.

M. DÉSILETS : Monsieur le Président, Mesdames et Messieurs les Commissaires, bonjour.

Je me présente, Mario Désilets, directeur de la centrale de Gentilly-2.

Il me fait plaisir de venir vous présenter un bilan des activités de déclassement réalisées à la centrale nucléaire de Gentilly-2 en 2013 et 2014.

Tous ces travaux ont été réalisés dans un but : permettre à l'installation nucléaire de satisfaire les critères afin de déclarer l'état de stockage sûr et d’entreprendre la période de dormance le 1er janvier 2015, comme prévu à l'échéancier.

Par la suite, je vous ferai part des activités que nous allons réaliser durant la prochaine période, soit de 2015 à 2020.

Comme nous l’avons indiqué lors de notre passage ici même au printemps 2013, nous avons mis en place, pour réaliser le projet de déclassement, une structure de travail qui nous a permis de réaliser les activités dans le respect de nos priorités, soit :

- la sûreté des installations;
- la santé et la sécurité;
- ainsi que la radioprotection; et
- le respect de l’environnement.

Il s’agissait d’une structure de gouvernance simple orientée vers la gestion efficace des activités, composée de trois unités de gestion avec des mandats distincts, soit un bureau de direction, une équipe de préparation des travaux et une équipe d’exécution des travaux.

La première unité de gestion, le bureau de direction, avait pour mission d’assurer la réalisation de la phase de stabilisation. Au cœur de ce bureau de direction, le comité de direction avait la responsabilité de veiller à la gestion du projet, d’assurer le déploiement des ressources et d’en rendre compte. Il devait s'assurer que les activités soient réalisées en conformité avec les encadrements en vigueur et dans le respect de l’échéancier et du budget.

La seconde équipe, l’équipe de préparation

des travaux, devait, quant à elle, élaborer les stratégies de mises en retrait et de reconfiguration des systèmes. Elle devait préparer toute la documentation requise pour l'exécution des travaux et maintenir à jour le plan de fin d'exploitation. Cette équipe voyait aussi à l'élaboration, la validation et la mise à jour des encadrements, ainsi qu'au suivi des aspects réglementaires.

Enfin, la troisième équipe, l'équipe d'exécution des travaux, était responsable de la réalisation des travaux. Elle s'assurait que ceux-ci soient réalisés dans le respect des règles de santé et sécurité, de radioprotection et d'environnement. Elle était également responsable de veiller à ce que les travailleurs aient la formation requise pour l'exécution des tâches assignées.

L'organisation transitoire mise en place en 2013 a permis de compléter les activités de déclassement liées à la phase de stabilisation.

Au fur et à mesure du déroulement de ces activités, l'organisation transitoire a migré progressivement vers une organisation permanente, laquelle prendra la relève à partir du 1er janvier 2015.

Il s'agit d'une organisation centrée sur les besoins de la prochaine phase. Elle sera composée d'un directeur d'installation, titulaire du permis

d’exploitation, qui dirigera trois unités : l’unité maintenance, l’unité soutien technique et l’unité environnement et sécurité.

L’unité maintenance sera responsable de tous les systèmes de l’installation, principalement des programmes de surveillance, d’entretien préventif et correctif. Elle sera aussi responsable du transfert du combustible irradié de la piscine vers les modules de stockage à sec.

L’unité soutien technique aura la responsabilité des affaires réglementaires, de l’ingénierie de maintenance, de la formation, du programme d’assurance qualité et du programme d’action corrective.

Quant à l’unité environnement et sécurité, elle sera responsable des programmes de surveillance environnementale, de santé et sécurité, de mesures d’urgence et de radioprotection.

Un mot maintenant sur la gestion et le développement des compétences de cette nouvelle équipe.

Tout le personnel de la nouvelle organisation reçoit notamment un programme de formation, théorique et pratique, adapté aux tâches que chacun aura à exécuter. La formation détaille, entre autres, le fonctionnement des équipements en service dans l’installation nucléaire ainsi que leurs programmes de

surveillance. La formation intègre aussi les notions liées au programme d'assurance qualité, de radioprotection et de sécurité adapté à la nouvelle réalité des employés. À la fin de la formation, chaque personne sera habilitée à bien s'acquitter de ses fonctions et responsabilités.

Comme auparavant, l'installation nucléaire aura son plan d'action en santé et sécurité au travail, lequel sera rigoureusement suivi par le directeur de l'installation nucléaire qui aura à en rendre compte à ses supérieurs.

Le plan contient différents éléments, dont les visites d'inspection, les réunions de sécurité, les rencontres individuelles, les réunions du comité local de santé et sécurité, les analyses d'événements, la revue annuelle de direction et bien d'autres.

Malgré le nombre d'activités qui se sont déroulées en 2013 et 2014, notons qu'il n'y a eu que trois pertes de temps en 2013, pour un taux de fréquence de 0,84, et qu'une seule perte de temps en 2014, pour un taux de fréquence de 1,16. Précisons que le taux de gravité de 13,9 en 2013 se situera à 1,54 en 2014.

Durant ces deux années, une attention particulière a été portée au niveau de la radioprotection. En effet, plusieurs plans ALARA ont été préparés pour encadrer les activités de déclassement qui dans plusieurs

cas étaient réalisés pour la première fois dans un tel contexte.

Notons que la dose moyenne par individu pour l'année 2013 se situe à 0,25 mSv et que pour les deux premiers trimestres de 2014, elle est de 0,26 mSv. Ces bilans font foi de l'attention accordée à la radioprotection et la santé et sécurité par les employés et la gestion.

Au cours des années 2013 et 2014, plusieurs étapes liées au processus de déclassement ont été réalisées, conformément au Plan détaillé de stabilisation transmis à la CCSN en mars 2013.

- La première étape que nous avons entamée fut le déchargement du combustible. Débutée dès janvier 2013, nous avons complété cette activité et atteint l'état « cœur déchargé » du réacteur le 3 septembre de la même année.

- Nous avons ensuite procédé aux activités couvrant le drainage et l'assèchement du circuit caloporteur à partir de l'automne 2013. Le drainage comme tel a débuté en janvier 2014 pour terminer en juin.

- Parallèlement à l'étape précédente, le liquide du caloporteur a été mis en baril et expédié pour valorisation chez un autre détenteur de permis.

- Ensuite, ce fut le drainage et

l’assèchement du circuit modérateur qui ont été réalisés d’août à novembre 2014.

- Afin de vidanger les réservoirs de résines usées contaminées, deux campagnes de transfert des résines vers les installations de gestion de déchets radioactifs solides ont été menées, une première en octobre et novembre 2013 et une seconde d’avril à septembre 2014.

- La mise en retrait des différents systèmes devenus non requis dans le bâtiment réacteur et le bâtiment turbine s’est effectuée en continu depuis l’été 2013.

- Enfin, les travaux de réfection de la piscine, débutés en juin dernier, sont toujours en cours et devraient être terminés au début 2015.

Nous sommes aussi à compléter actuellement tous les documents résultant de notre nouveau système de gestion, lequel encadre les activités qui seront réalisées durant la période de 2015 à 2020. Ces documents couvrent les différents programmes, dont la radioprotection, l’environnement, la sécurité, les incendies et les mesures d’urgence.

Certains systèmes doivent demeurer en service afin d’assurer le refroidissement du combustible dans la piscine de stockage. Il s'agit notamment des systèmes d’eau de refroidissement, d’air comprimé,

d’électricité et de protection incendie. Des modifications sont requises pour ces systèmes afin de les adapter à leur nouvelle mission. Ces modifications d’ingénierie sont réalisées conformément aux processus en vigueur.

Avec son arrêt définitif et la mise en retrait d’équipements, l'installation nucléaire de Gentilly-2 a atteint la première phase de l’état de stockage sûr.

En effet, l’état de stockage sûr se divise en deux phases :

- l'état de stockage sûr piscine : stockage du combustible irradié dans les piscines; et
- l’état de stockage sûr sec : stockage du combustible irradié à sec dans les modules CANSTOR.

Les principales activités réalisées qui permettent de déclarer l'état de stockage sûr piscine de l'installation nucléaire de Gentilly-2, sont les suivantes :

- l’entreposage de l’eau lourde tritiée hors du bâtiment réacteur;
- le drainage des systèmes d’eau légère;
- le retrait et la disposition des huiles des systèmes situés dans le bâtiment réacteur; et
- le transfert des résines usées des systèmes également situées dans le bâtiment réacteur.

La prochaine étape se déroulera de 2015 à 2020. Au cours de cette période, le combustible irradié sera transféré vers le site d'entreposage à sec, après son séjour planifié en piscine.

Nous allons également procéder à la réalisation de différents programmes tels :

- le programme de maintenance préventive des systèmes importants pour la sûreté;

- le programme de gestion du vieillissement, afin de s'assurer que les systèmes, structures et composants demeureront sécuritaires tout au long de la période de stockage sûr; et enfin,

- le programme de surveillance environnementale.

Nous allons aussi travailler au renouvellement de notre permis prévu en 2016.

Deux nouveaux modules CANSTOR seront construits afin de compléter l'entreposage du combustible irradié.

Ensuite, nous finaliserons la mise en retrait des systèmes au fur et à mesure que ceux-ci ne seront plus requis.

Et finalement, nous procéderons au drainage du caisson, des boucliers et des piscines.

C'est à ce moment que l'installation

nucléaire aura atteint l'état de stockage sûr à sec, pour lequel nous allons, également, préparer le plan de surveillance pour la période de 2021 à 2050.

Ceci conclut donc ma présentation. Je vous remercie de votre attention.

Nous allons maintenant vous présenter une vidéo que nous avons préparée et qui résume les activités de déclassement réalisées au cours des deux dernières années.

--- Présentation vidéo / Video presentation

M. DÉSILETS : J'espère que cette vidéo vous a plu et qu'elle vous a permis d'apprécier toute l'ampleur du travail réalisé. Je crois qu'il est essentiel ici de souligner l'engagement exceptionnel de nos employés, qui ont su relever ce défi avec toute la rigueur et le professionnalisme requis.

J'aimerais maintenant céder à nouveau la parole à Mme Louise Pelletier.

MME PELLETIER : En janvier 2010, Hydro-Québec me confiait la responsabilité du volet nucléaire au sein de l'entreprise. Au terme de plus de 39 années de service, je prendrai ma retraite le 31 décembre prochain. Ce fut un grand plaisir de travailler avec une équipe de cadres chevronnés et avec des employés dédiés.

À la suite de mon départ, la

responsabilité du volet nucléaire d'Hydro-Québec relèvera, au 1er janvier 2015, de la vice-présidence Exploitation des équipements de production, de la Division production d'Hydro-Québec, dirigée par monsieur Bernard Poulin. Ce dernier veillera à la poursuite des activités de déclassement de l'installation de Gentilly-2 avec la même rigueur et le même professionnalisme qui ont toujours caractérisés nos actions dans le passé.

J'aimerais aussi profiter de cette dernière occasion devant vous pour souligner l'excellent travail du personnel de la Commission. Leur travail fut d'autant plus apprécié au cours des deux dernières années, qui ont été sans aucun doute les plus difficiles de l'histoire de Gentilly-2, et ce, sur tous les plans.

Je peux affirmer en toute sincérité que votre support a contribué à la qualité et au succès du travail accompli par nos employés et notre organisation et au sentiment de fierté que nous en retirons.

J'aimerais maintenant passer la parole à monsieur Bernard Poulin, qui aimerait vous adressez quelques mots.

M. POULIN : Monsieur le Président, Mesdames et Messieurs les Commissaires, bonjour.

Je me présente, Bernard Poulin. Je suis vice-président, Exploitation des équipements de production

pour la division Hydro-Québec Production.

C'est dans un esprit de continuité que nous accueillerons à la vice-présidence l'installation nucléaire de Gentilly-2 en janvier 2015. À ce titre, je m'engagerai, avec l'équipe de l'installation de Gentilly-2, dans la poursuite des activités qui ont été planifiées pour les années à venir, avec tout le professionnalisme et la rigueur qui s'imposent.

J'ai pu suivre au cours des dernières années les différents dossiers entourant Gentilly-2 puisque je siège sur le même comité de gestion de la division Production que ma consœur Louise Pelletier.

En effet, j'ai eu régulièrement accès au rendre-compte des activités de cette installation et, au fil du temps, j’ai pu prendre connaissance de divers dossiers, tels que le cadre réglementaire, la planification des activités de déclassement, les enjeux 2015-2020, les ententes et partenariats, pour ne nommer que ceux-là.

Parmi les activités qui nous mobiliseront au cours des six prochaines années, il y aura notamment le transfert du combustible irradié vers les installations de stockage à sec, après son séjour en piscine. Nous travaillerons aussi au renouvellement du permis qui vient à échéance en 2016.

Certains des dossiers et enjeux qui caractérisent la gestion de l'installation de Gentilly-2 sont similaires à ceux qui existent pour la gestion du parc de production dont j’ai la responsabilité, un parc composé d'une soixantaine de centrales hydroélectriques et plus de 750 barrages et ouvrages régulateurs. Tout comme à Gentilly-2, l’exploitation sûre et sécuritaire des barrages est également assujettie à une réglementation stricte, notamment la *Loi sur la sécurité des barrages*.

La vice-présidence compte des équipes spécialisées et d’expertises, tant à Montréal que dans les différentes régions du Québec, autant d'entités qui pourront, lorsque requis, appuyer les activités en cours au site de Gentilly-2. Plusieurs anciens employés de la centrale de Gentilly-2 œuvrent d'ailleurs maintenant au sein de ces unités.

C'est donc avec confiance que je peux affirmer que l’expertise de la vice-présidence Exploitation de équipements de production, jumelée à celle de l'équipe permanente de Gentilly-2, permettra de poursuivre la mission qu’Hydro-Québec s’est donnée, soit de procéder au déclassement de Gentilly-2 de façon sûre et sécuritaire, le tout en conformité avec les exigences réglementaires applicables, à l’intérieur des échéanciers et des coûts prévus.

C'est avec plaisir que nous nous rendons maintenant disponibles pour vos questions. Merci.

LE PRÉSIDENT : Merci beaucoup pour cette présentation, mais avant qu'on fasse toutes les félicitations qu'il faut, j'aimerais avoir la présentation de CCSN, s'il y a une présentation.

Dr. Rzentkowski, avez-vous des remarques?

Dr RZENTKOWSKI : Malheureusement, il n'y a pas de présentation.

LE PRÉSIDENT : O.K. Alors, nous allons maintenant passer aux questions des commissaires, en commençant avec monsieur Harvey.

MEMBRE HARVEY : Merci, Monsieur le Président.

Je dois d'abord féliciter Hydro-Québec pour la qualité de la présentation qu'ils nous ont faite aujourd'hui, particulièrement pour la vidéo qui, dans quelques minutes, nous évite de lire des centaines de pages et d'avoir de la difficulté des fois à comprendre des graphiques. Merci beaucoup pour cet aspect-là et aussi pour la présentation, le début par madame Pelletier, qui lisait presque dans mes pensées, qui a répondu à beaucoup de mes questions, mais ça me ferait de la peine de vous laisser partir sans vous en poser quelques-unes. En fait, j'en ai peut-être juste une, mais avec certains volets. Ça

touche la sécurité générale du site.

Évidemment, avec le déclassement de Gentilly-2, les risques associés à l'opération sont certes moindres que par le passé, mais ma question, le grand thème de ma question : Quels sont les risques résiduels, quels sont les risques actuels? Est-ce qu'ils ont été clairement identifiés? Est-ce qu'ils ont été signifiés aux municipalités que vous avez mentionnées tantôt et au public ou est-ce que ce sera transmis, l'information au public?

Quelle importance... et vous en avez parlé tantôt, mais on peut aller un peu plus loin. Quelle importance est donnée à cet aspect dans la gestion future de Gentilly-2 et quelles sont les mesures prises pour assurer -- ça aussi, vous en avez parlé un peu -- pour assurer l'intérêt et la prise en charge de la surveillance, l'entretien, les réactions aux urgences qui pourraient survenir, aux problèmes éventuels, prenant en considération la réduction de personnel qu'il y a eu, aussi la rétention du personnel, qui semble ne pas avoir été nécessairement facile, et le maintien de l'expertise?

Comment ferez-vous... avez-vous fait pour justement maintenir, au sein d'une équipe très réduite, cette expertise qui va garantir à la population locale et à la Commission que tout est pris en charge par Hydro-Québec?

M. DÉSILETS : Mario Désilets pour le

verbatim.

Premièrement, je dois dire que l'organisation, la structure permanente qui est en place, qui est formée à peu près d'une soixantaine de personnes, c'est tous du monde qui étaient déjà à la centrale, qui œuvraient déjà à la centrale, dans le milieu, et qui ont plusieurs années d'expérience. Ça fait que, de ce côté-là, on a un noyau actuellement fort qui va être présent pour les années futures.

Et comme monsieur Poulin l'a dit, on peut aussi compter dans la vice-présidence des Équipements d'exploitation de production sur de la main-d'œuvre qualifiée, autant technique que du personnel de métier, qui se sont replacés ailleurs dans l'entreprise mais à l'intérieur de cette vice-présidence là où sera rattachée la future organisation. Donc, on peut compter sur notre noyau d'une soixantaine de personnes très expérimentées et sur les ressources qui sont... qui ont trouvé emploi à l'intérieur de la vice-présidence, qui peuvent nous supporter si on en a besoin.

Quant aux risques résiduels, vous l'avez dit tantôt, et vous avez vu, avec tout le combustible qui est rendu dans les piscines, avec tous les systèmes qui ont été drainés, avec toutes les huiles qui ont été vidangées, toutes les résines qui ont été entreposées, le risque a

grandement diminué à l'installation nucléaire.

Maintenant, on vient de mettre à jour notre rapport de sûreté. Il en ressortait, quand ils ont fait l'étude pour écrire le rapport de sûreté, deux genres d'événements qui pouvaient survenir.

Le premier, c'est qu'on a regardé vraiment le combustible qui est entreposé dans les piscines, et il y a trois choses qui pouvaient arriver là.

Vous savez que nos piscines, il faut qu'elles soient qualifiées sismiques, puis il y a des événements tels la perte de refroidissement qui pouvaient survenir, et les études qui ont été faites, tant au niveau de la sismicité, tant au niveau de la perte de refroidissement, ont démontré que l'événement aux piscines n'était pas crédible. Et si jamais il arrivait quelque chose, on bénéficie d'une période de temps qui est assez longue pour intervenir. On parle de trois jours et plus. Et plus les années vont passer là, 2015, 2016, cette période-là va s'allonger, parce qu'au fur et à mesure qu'on avance dans le temps, le combustible, il y a moins d'énergie et il dégage moins de chaleur.

Le deuxième risque qui a été, je dirais, identifié, c'est notre rouleau de modérateur qui est entreposé à l'intérieur du bâtiment service dans quatre réservoirs. Et encore là, comme vous savez, ces

réservoirs-là ont toutes les qualifications sismiques requises pour l'entreposage d'eau lourde. Ils ont des systèmes de surveillance pour s'assurer que s'il y a une fuite, elle est détectée. Et dans les différents scénarios d'événements qui ont été analysés, même s'il n'y avait pas d'intervention pendant 72 heures, la dose qui serait prise par la population est négligeable.

Alors, vraiment là, tout a été mis en place pour assurer, et malgré que les impacts soient faibles, on a tout mis en place pour assurer la surveillance et être en mesure d'intervenir s'il arrivait un événement, que ce soit à la piscine, que ce soit au niveau du stockage d'eau lourde.

Il y avait beaucoup d'autres points dans votre question là. Je n'ai peut-être pas tout couvert.

MEMBRE HARVEY : Il y en a encore quelques-uns, mais je voudrais juste poursuivre sur ça. Au niveau de la sécurité, je me rappelle, lorsqu'on est allé visiter la centrale, tout ce qu'il fallait passer au niveau de sécurité. Qu'est-ce qu'il va rester de ça?

M. DÉSILETS : Mario Désilets pour le verbatim.

Essentiellement la même chose. Essentiellement la même chose. Quand on passe le poste de garde, c'est exactement la même chose que quand vous avez

passé il y a peut-être quatre ou cinq années là. C'est les mêmes, je dirais, contrôles qu'il y a à franchir. La surveillance est la même. Ça fait que, de ce côté-là, on n'a pas...

La seule chose qui a, je dirais, diminué là, c'est au niveau des armements.

MEMBRE HARVEY : Mais je pense qu'on est mieux de pas... Oui? Il y a un commentaire.

M. POULET : Oui. Benoit Poulet pour le verbatim.

L'équipe de la CCSN a effectivement complété une inspection l'année dernière et a confirmé que le programme était conforme à toutes les exigences réglementaires. Donc, c'est confirmé, c'est en place. Sans ajouter plus de détails, effectivement, ça été vérifié par le personnel de la CCSN.

MEMBRE HARVEY : Un autre aspect qui était dans ma question était au niveau de la motivation. Je comprends que vous avez le personnel, puis c'est du personnel qui était là avant, mais la perspective, je ne sais pas, de carrière ou de poursuite de carrière n'est pas la même qu'avant aux installations, et c'est cet aspect-là qui me préoccupe un peu. Quand une centrale est en opération, garder la motivation est beaucoup plus facile. Ça fait que c'est à ce niveau-là qui m'inquiète. Est-ce

que les gens qui sont demeurés ne cherchent pas déjà à partir?

M. DÉSILETS : Mario Désilets pour le verbatim.

Moi, je dois vous avouer que les personnes qui ont été, je dirais, retenues, bien, elles désiraient être retenues, et les gens qui ont obtenu des postes, ils sont fiers d'avoir obtenu des postes à la centrale, et ils ont à cœur le travail qu'ils font. Alors, de ce côté-là, la motivation est là.

Il ne faut pas oublier que peu importe ce qui peut arriver, le personnel à Hydro-Québec bénéficie d'une sécurité d'emploi. Ça fait que ça les sécurise. Même s'ils savent que d'ici cinq ou six ans, il va y avoir à nouveau une nouvelle organisation du travail, bien, les gens demeurent quand même optimistes et motivés dans leur travail.

MEMBRE HARVEY : Ça va.

LE PRÉSIDENT : Mais j'aimerais avoir peut-être plus de précisions. Combien de gens vont être dans cette organisation nouvelle?

M. DÉSILETS : Mario Désilets pour le verbatim.

On parle d'à peu près 60 personnes.

LE PRÉSIDENT : Soixante?

M. DÉSILETS : Oui.

LE PRÉSIDENT : Et sur le site, le site lui-même, combien de gens demeurent sur le site?

M. DÉSILETS : À l'intérieur de l'enceinte clôturé là, c'est 60 personnes.

LE PRÉSIDENT : Soixante personnes?

M. DÉSILETS : Oui.

LE PRÉSIDENT : O.K. Merci.

Monsieur Tolgyesi.

MEMBRE TOLGYESI : Merci, Monsieur le Président.

Je ne veux pas répéter, mais je souligne les félicitations que monsieur Harvey vous a faites. Pour moi, c'était la même chose. Et si vous permettez, Monsieur le Président, d'avance, je vous souhaite une bonne retraite. Profitez-en.

Vous avez parlé que dans la nouvelle structure, il y a le directeur des installations qui va être titulaire du permis. C'est qui présentement le titulaire du permis?

M. DÉSILETS : Mario Désilets pour le verbatim.

Actuellement, je suis titulaire du permis.

MEMBRE TOLGYESI : Et dans la nouvelle structure, vous allez demeurer le titulaire du permis ou

c'est vous le directeur des installations?

M. DÉSILETS : Mario Désilets pour le verbatim.

Dans la nouvelle organisation, monsieur Poulin va nommer un nouveau directeur, et je vais demeurer, moi, encore pour une certaine période en 2015 pour accompagner le nouveau directeur, voir à sa formation, faire le transfert des connaissances, puis m'assurer que lorsque je vais quitter, le nouveau directeur va posséder tout ce qu'il faut pour assurer la fonction de titulaire de permis.

MEMBRE TOLGYESI : Et c'est pour quand l'échéancier du permis? Ça veut dire que si vous partez à peu près en même temps ou si vous partez d'avance, il faut transférer le permis au niveau titulaire?

M. DÉSILETS : Mario Désilets pour le verbatim.

Vous avez tout à fait raison. Mais peut-être juste pour vous préciser. Titulaire de permis, peu importe qu'il y ait un renouvellement ou pas, il y a un titulaire de permis qui est en fonction.

LE PRÉSIDENT : Si j'ai bien compris, vous avez quelqu'un ou vous allez prendre votre retraite?

M. DÉSILETS : Mario Désilets pour le verbatim.

Peut-être une petite précision là. C'est Hydro-Québec qui est titulaire de permis. Hydro-Québec mandate le directeur, Production nucléaire à titre de détenteur de permis.

Oui, je vais éventuellement quitter Hydro-Québec pour ma retraite, tout comme madame Pelletier. Je ne l'amènerai pas comme souvenir, Monsieur Harvey.

--- Rires / Laughter

LE PRÉSIDENT : Monsieur Tolgyesi.

MEMBRE TOLGYESI : Donc, si je comprends bien, c'est Hydro-Québec qui est titulaire, le permis est valide jusqu'au 30 juin 2016, ça veut dire que si on a des changements de personnes, c'est toujours Hydro-Québec qui est titulaire?

M. DÉSILETS : (Indiscernable, sans microphone).

MEMBRE TOLGYESI : La prochaine question. On a parlé d'organisation. Vous avez parlé de la main-d'œuvre, qu'il y à peu près 60 personnes d'Hydro-Québec qui vont être sur le site. Est-ce que vous allez vous servir aussi des sous-traitants, des consultants ou peut-être du personnel que vous pouvez emprunter d'Hydro-Québec, des autres sections, pour accomplir le travail?

M. DÉSILETS : Mario Désilets pour le

verbatim.

Vous savez, de tout temps à Gentilly-2 là, peu importe qu'on était en exploitation ou qu'on est en déclassement, on a utilisé et donné des contrats à des firmes externes ou à des contracteurs, surtout quand il s'agissait de travaux de modification qui impliquent que ça prend du personnel de construction pour faire le travail.

Alors, évidemment, dans les années qui viennent, oui, il y aura des contrats donnés à des firmes externes. Il y aura aussi des contrats donnés à des gens de construction pour faire des modifications s'il y a lieu à l'intérieur de la centrale, travaux qui ne sont pas sous la juridiction du personnel de maintenance d'Hydro-Québec là.

MEMBRE TOLGYESI : Ça veut dire que vous vous attendez qu'on ait en continu à peu près peut-être une trentaine de personnes additionnelles ou une vingtaine de personnes additionnelles équivalant à plein temps sur le site?

M. DÉSILETS : Mario Désilets pour le verbatim.

Je ne peux pas dire que c'est un nombre fixe continu. Ça varie en fonction du travail qu'il y a à exécuter.

MEMBRE TOLGYESI : C'est pour ça que j'ai

dit équivalant à temps plein.

M. DÉSILETS : Oui.

MEMBRE TOLGYESI : Vous avez présenté l'échéancier des activités en 2014. Ça serait peut-être bon si la prochaine présentation que vous présentez est aussi plus longue, on parle de 2015 à 2020, pour avoir une idée qu'est-ce que ça donne, c'est quoi les échéanciers, qu'est-ce qui vous attend comme travail.

Prochaine question. Vous avez parlé de gestion de vieillissement. Maintenant que le réacteur est arrêté, déclassé et un processus de démantèlement enclenché, en quoi consisterait l'importance de la gestion de vieillissement?

M. DÉSILETS : Mario Désilets pour le verbatim.

Bien, dans la gestion du vieillissement là, comme vous savez, elle est surtout concentrée au niveau de nos installations de gestion de déchets et au niveau aussi de nos enceintes CANSTOR. Il y a un programme de surveillance pour le béton.

Malgré que le bâtiment réacteur n'est plus... il n'y a pas un réacteur à l'intérieur qui est en marche et qui peut avoir une surpression, il y a quand même des vérifications de base à faire sur des bâtiments de cette structure-là pour s'assurer que ça vieillit comme il

faut puis que si on voit qu'il y a dégradation, on est en mesure de réparer. Et il y a toute l'infrastructure des bâtiments qui est autour, qu'il faut s'assurer qu'eux autres aussi, ils vont rester, je dirais, debout pour les 40 prochaines années.

MEMBRE TOLGYESI : Vous avez parlé de 2050 comme à peu près le temps où le combustible va être transféré au stockage sec canadien, the deep repository, mais si vous regardez ce qu'ils parlent, eux autres, ils ne parlent pas de 2050, ils parlent peut-être encore de 40, peut-être 50 ans avant que ça soit prêt. Qu'est-ce qu'il arrive, à ce temps-là, avec votre stockage? Vous pouvez continuer à stocker à Hydro-Québec?

M. DÉSILETS : Mario Désilets pour le verbatim.

Les installations de... Nos unités CANSTOR dans lesquelles sont entreposés le combustible à sec peuvent, je dirais, si elles sont bien entretenues puis qu'ils ont fait une bonne gestion de vieillissement, peuvent demeurer encore sur place pour plusieurs années. On est capable d'accommoder des délais si la société de gestion des déchets nous demande un certain délai.

MEMBRE TOLGYESI : Ma dernière question, Monsieur le Président. Qu'est-ce qu'il arrive avec Gentilly-1 dans tout ce démantèlement-là?

M. DÉSILETS : Mario Désilets pour le verbatim.

Bien, comme vous savez, Gentilly-1 appartient, je pense, à CNL là -- aujourd'hui, ce n'est plus AECL -- et c'est eux autres qui doivent s'occuper du déclassement de cette centrale-là. Et d'après les discussions qu'on a eues avec eux, ce n'est pas à court terme. On entretient des communications régulières avec CNL parce qu'évidemment, ils sont sur nos terrains, puis quand ils font quelque chose, on veut le savoir, et on se rend compte à peu près, je dirais, sur une base trimestrielle, et il n'y a pas... actuellement, il n'y a pas, je dirais, d'entente pour qu'on travaille ensemble pour faire le déclassement des deux centrales en même temps là.

LE PRÉSIDENT : O.K. Merci.

Madame Velshi et Dr McEwan poseront leurs questions en anglais maintenant, et Hydro-Québec pourra répondre dans la langue de leur choix.

Alors, c'est Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President, and my apologies for asking the questions in English.

Am I correct in assuming that you have made a decision that your decommissioning will be a delayed decommissioning, that the unit will remain in safe storage

for a longer period of time?

M. DÉSILETS : Mario Désilets pour le verbatim.

That's true.

MEMBER VELSHI: Thank you.

And --

LE PRÉSIDENT : Je m'excuse, mais est-ce que c'était une politique gouvernementale ou c'était une décision d'Hydro-Québec?

M. DÉSILETS : Mario Désilets pour le verbatim.

C'est la décision d'Hydro-Québec. Le plan qu'Hydro-Québec privilégie, c'est une dormance sur une période de 40 ans.

LE PRÉSIDENT : Ça été accepté? Est-ce qu'il faut obtenir l'approbation du gouvernement?

M. DÉSILETS : Mario Désilets pour le verbatim.

Non.

LE PRÉSIDENT : Est-ce qu'on a discuté d'une autre manière de le faire?

M. DÉSILETS : Mario Désilets pour le verbatim.

On a demandé... Suite à la Commission parlementaire sur les impacts de la fermeture de

Gentilly-2, Hydro-Québec a demandé à une firme spécialisée de faire un scénario de déclassement rapide en établissant des tableaux de coûts, et suite à l'étude des données du démantèlement rapide versus le scénario qu'Hydro-Québec avait dans ses cartons, bien, Hydro-Québec a trouvé, pour elle, que ça continuait d'être avantageux de faire le déclassement juste au bout de 40 ans pour des raisons, je dirais, un, économiques.

Faire un déclassement plus rapide, ça demande de la mobilisation d'équipes de construction dans la première phase de démantèlement, et comme le transfert des déchets ne peut se faire que dans les années 2050, il faut remobiliser les équipes pour faire cette partie-là.

Et la deuxième raison aussi, c'est qu'en faisant un démantèlement rapide, bien, on se doit d'investir des argents pour, je dirais, décontaminer puis réduire les champs de rayonnement, ce qui, avec le temps, la décroissance radioactive fait son effet par elle-même.

Alors, pour ces raisons-là, on a gardé le scénario de dormance sur une période de 40 ans.

LE PRÉSIDENT : Alors, étant donné que des options étaient discutées publiquement, est-ce que cette étude est disponible, par exemple, pour le public?

M. DÉSILETS : Mario Désilets pour le verbatim.

Ce n'est pas une étude qu'on a fait faire. C'est juste on les a fait travailler sur un scénario et on a eu des tableaux de coûts. Maintenant, je pense que nos gens de communication, quand ils donnent l'information aux personnes qui veulent l'avoir, ils le disent dans les termes que je viens de vous dire.

LE PRÉSIDENT : O.K. Merci.

Ms Velshi.

MEMBER VELSHI: I'm trying to understand how much sharing of OPEX happens amongst the stations. Did you get a lot of help from OPG and their experience with putting units 2 and 3, Pickering units 2 and 3 in safe storage?

M. DÉSILETS : Mario Désilets pour le verbatim.

Dès le début du déclassement là en 2013, il y a une équipe d'OPG qui est venue à la centrale et qui a passé à peu près une semaine pour partager avec nous l'expérience que ces gens-là avaient eue dans le déclassement de leurs... dans la fermeture, je dirais, de leurs centrales, unités 2 et 3.

Et par la suite, quand on a eu besoin de renseignements particuliers, via... on fait partie de CANDU Owners Group. Alors, via COG, on a fait des demandes ponctuelles pour avoir de l'information quand on a eu des

problèmes.

Mais à date, nous, on a actuellement de l'information qu'on met sur le site de COG, des activités qu'on a faites puis des problèmes qu'on a encourus en cours d'activités. On est plus... À l'étape où on est rendu, on a plus d'information à fournir là.

MEMBER VELSHI: Sorry, the translation takes a little bit longer.

So what hopefully is coming out from your experience is kind of best practices for decommissioning that Pickering when it shuts down another six units can access then?

M. DÉSILETS : Mario Désilets pour le verbatim.

Toute notre information est disponible pour l'industrie. Comme je vous ai dit tantôt, on en a donné à COG, qui ont mis sur leur site, qui est accessible, mais toutes les demandes d'information qu'on a, on transmet l'information aux autres utilités qui la désirent.

MEMBER VELSHI: Shifting gears altogether, was there much salvage value of any of your equipment or instrumentation? Is your heavy water going to be reused by anyone else? And particularly the conventional side of the plant, was there any salvage value to any of that?

M. DÉSILETS : Mario Désilets pour le

verbatim.

Comme on a mentionné dans la présentation, l'eau lourde du système caloporteur, on a réussi à la valoriser. Il y a un autre détenteur permis qui l'a acquise.

Pour ce qui est des autres équipements, il faut comprendre que du côté vapeur, du côté balance of plan, comme ils disent en anglais là, la technologie qu'on a date des années '70, et il y a peu de personnes qui sont intéressées à acquérir ces équipements-là, qui sont rendus quand même assez vieux, et justement, le but de faire une réfection, c'est de remplacer ces vieux équipements-là. Alors, il y a beaucoup d'équipements qui n'ont plus de valeur, et il n'y a pas de personnes qui sont intéressées à les acquérir.

MEMBER VELSHI: Thank you.

And my last question is for staff. As Hydro-Québec has gone through its safe storage phase, can you comment on the adequacy of the regulatory framework and is there a need for amendments or augmentation as a result of this experience?

MR. POULET: Thank you for the question. Je vais répondre en français. Pardon. The question came in English, so I was going to answer in English.

Les encadrements réglementaires, les

documents de réglementation sont adéquats pour effectuer la surveillance lors de la transition de la phase opérationnelle à la phase d'état de stockage sûr qui va débuter bientôt.

Généralement, le personnel de la CCSN avait tous les outils pour assurer le suivi et l'encadrement des activités d'Hydro-Québec. Les leçons qu'on aurait apprises, ce serait sur la façon d'effectuer cette surveillance. Les activités étant des activités uniques, qui ne sont pas répétées, ce sont des activités nouvelles qui n'ont pas été exécutées depuis plus de 30 ans. Donc, la façon d'effectuer la surveillance est très différente d'une centrale en état d'exploitation.

L'encadrement... Les plans d'Hydro-Québec avaient été développés avec suffisamment de détails. Il y a eu énormément d'échanges techniques sur les façons de procéder qui ont eu lieu sur la période de deux ans qu'on vient de terminer, et puis généralement, les revues réglementaires ont été effectuées avant que l'activité soit complétée ou avant même débutée.

Donc, nous avions une entente avec Hydro-Québec d'obtenir toute l'information, de poser nos questions, de s'assurer que tout était bien fait et adressé à Hydro-Québec avant qu'ils débutent. Lorsqu'ils ont débuté, nous faisions tout simplement nous assurer qu'ils

suivaient bien leur plan et qu'il n'y avait aucun impact négatif pour la sûreté.

Est-ce que ça répond à votre question?

MEMBER VELSHI: Yes. Thank you.

THE PRESIDENT: Dr. McEwan.

MEMBER McEWAN: Thank you, Mr. President. I think this is possibly a question for staff, possibly for both.

We've talked in this presentation -- a very nice presentation, again, thank you -- about safety. I presume there is a parallel plan in place to ensure the security of the site over a long period of time and to ensure that the reduction in staff doesn't impact security?

M. POULET : Tel que mentionné dans la présentation, les encadrements de sécurité présentement ont été revus par le personnel de la CCSN l'année dernière. Ils ont été trouvés satisfaisants et ils sont encore en vigueur. Donc, si Hydro-Québec entreprend ou anticipe changer le programme de sécurité pour l'installation, il faudra qu'ils soient revus par le personnel de la CCSN.

MEMBER McEWAN: Okay. Thank you.

LE PRÉSIDENT : Monsieur Harvey.

MEMBRE HARVEY : Qu'est-ce qui advient des échangeurs de vapeur, des heat generator ou des générateurs de vapeur?

M. DÉSILETS : Mario Désilets pour le verbatim.

Vous voulez dire les générateurs de vapeur?

MEMBRE HARVEY : Oui, parce qu'on a eu certains problèmes avec ça là à Bruce.

M. DÉSILETS : Ah, O.K. Oui.

MEMBRE HARVEY : Et qu'allez-vous faire, je veux dire...

M. DÉSILETS : Pour l'instant, Monsieur Harvey, les générateurs de vapeur sont à l'intérieur du bâtiment réacteur et ils vont demeurer là encore pour les 40 prochaines années là.

MEMBRE HARVEY : Ce qui veut dire qu'on ne peut pas comparer Gentilly-2 avec Gentilly-1? Parce qu'on est allé visiter Gentilly-1, on s'était promené un peu partout. Et ce n'est pas le cas de Gentilly-2 là, ça demeure un bâtiment qu'on ne peut pas visiter comme ça là?

M. DÉSILETS : Mario Désilets pour le verbatim.

Ça demeure un bâtiment qui va être à accès contrôlé, et les personnes qui vont pouvoir y accéder vont devoir avoir les qualifications requises puis les protections requises pour y faire des inspections.

MEMBRE HARVEY : Même si ça ressemble un

peu à Gentilly-1 comme vidé de... sauf que Gentilly-1 était complètement vidé de son contenu, c'est ça?

M. DÉSILETS : Mario Désilets pour le verbatim.

Il faut se rappeler que Gentilly-1, c'est un réacteur qui a opéré 180 jours, alors que nous, on a opéré pendant 29 ans. Vous comprendrez que les pièces ne sont pas dans le même état radioactif que la centrale de G-1.

LE PRÉSIDENT : Mais je suis sûr qu'on pourrait organiser une visite pour vous.

MEMBRE HARVEY : Ah, ça serait intéressant. Ça serait intéressant.

--- Rires / Laughter

LE PRÉSIDENT : D'autres questions?

MEMBRE HARVEY : Avec l'habillement et l'équipement nécessaires.

LE PRÉSIDENT : Absolument.

D'autres questions?

MEMBRE HARVEY : Est-ce que, Madame Pelletier, vous allez avoir votre party de retraite dans le bâtiment?

MME PELLETIER : Ce n'est pas toujours nécessaire d'avoir un party de retraite, et je me considère bien saluée par tous ceux avec qui j'ai travaillé de près

ou de loin pendant toutes ces années. Je suis très contente aussi de la période passée à Gentilly et aussi des deux dernières années de déclassement. Ça nous a permis d'expérimenter vraiment beaucoup de choses et d'avoir l'occasion de confirmer qu'Hydro-Québec s'est vraiment tournée vers Gentilly-2 pour nous aider à faire le déclassement sur tous les aspects.

Donc, c'est dans quelques jours. S'il y avait des petites salutations à faire, elles ont déjà eu lieu et j'en suis bien contente, et je quitterai le 31 comme prévu. Merci beaucoup.

LE PRÉSIDENT : Monsieur Tolgyesi.

MEMBRE TOLGYESI : Est-ce que vous allez continuer à participer aux travaux, en ce qui concerne l'entreposage dans la piscine à sec, avec les autres centrales nucléaires, avec le groupe CANDU, et cætera, ou c'est quelque chose qui va être réduit?

M. DÉSILETS : Mario Désilets pour le verbatim.

J'ai de la misère à saisir votre question là, en ce sens que pour le transfert de notre combustible, on est autonome. Par contre, on continue de faire partie de la société de gestion des déchets nucléaires. On est sur le board. Hydro-Québec a un représentant, et il y a des réunions, je pense, à tous les mois où il y a un

représentant d'Hydro-Québec qui continue à siéger sur ce comité-là.

MEMBRE TOLGYESI : Et ça va continuer? C'était ça ma question.

M. DÉSILETS : Oui, effectivement.

MEMBRE TOLGYESI : Et la dernière. Je reviens un petit peu à ce que madame Velshi a demandé, la valeur. Je ne parle pas maintenant de la partie où vous avez parlé de l'équipement qui a 40 ans ou 30 ans, et cætera, mais je parle de certaines installations ou, par exemple, certains bâtiments, certaines sections, le ferrailleur, et cætera, et cætera. Comment vous allez vous assurer qu'il n'y a pas de... le matériel que vous vendez, il est libre de toute radioactivité?

M. DÉSILETS : Mario Désilets pour le verbatim.

Bien, le matériel qu'on sort, on a des équipements pour en faire la vérification puis s'assurer qu'il n'y pas de contamination quand on a à en sortir. Que ce soit du matériel de rebut, que ce soit du matériel qu'on valorise, on a toujours le souci, et dans nos procédures c'est prévu comme ça, on se doit de faire une vérification d'absence de contamination avant de s'en départir, avec des papiers qui documentent que les mesures ont été faites, puis que ça été fait avec du personnel qualifié, puis que

c'est autorisé par... on a un responsable technique de radioprotection qui signe tous les équipements qui ont à sortir et qui s'assure qu'ils ont été vérifiés adéquatement.

LE PRÉSIDENT : Moi, je pense que le volet le plus important, c'est l'emploi. Alors, combien de gens ont trouvé d'autres emplois ailleurs?

M. DÉSILETS : Je vais demander à madame Pelletier de répondre à ça.

MME PELLETIER : Louise Pelletier pour le verbatim.

Vous vous rappelez qu'à l'automne 2012, on avait à peu près 600 personnes qui travaillaient à la centrale. Je vous donne les chiffres, mais ça change à tous les jours, mais c'est assez proche de la réalité d'aujourd'hui.

On en a 346 qui ont trouvé un travail à Hydro-Québec, y compris la petite équipe qui est sur le... l'équipe permanente qui restera sur le site, une soixantaine de personnes. Donc, 346 personnes ont retrouvé un travail à Hydro-Québec; 112 ont quitté, soit pour la retraite ou pour d'autres projets personnels, avec certains... je dirais certaines facilités qu'on a mis à leur disposition pour les aider à faire leur transition.

Il nous reste à peu près 130-135 personnes

qui restent à être relocalisées, et les moyens restent en place, avec une structure spéciale qui sera mise en place aussi au mois de janvier, où le directeur, Ressources humaines, Production, aura à voir personnellement à la relocalisation de ces 130 quelques personnes.

LE PRÉSIDENT : Combien ont trouvé des emplois hors de Québec, à Bruce Power, à OPG, sont restés dans le domaine nucléaire?

MME PELLETIER : On a une personne, à ma connaissance, qui serait allée dans une autre utilité nucléaire et trois autres personnes qui auraient quitté pour d'autres compagnies au Québec ou dans la région. Mais les gens... ceux qui sont vraiment restés à Hydro-Québec, au Québec dans l'expertise nucléaire, sont ceux qui se retrouvent dans notre structure permanente.

LE PRÉSIDENT : Merci.

Est-ce qu'il y a d'autres questions?

La dernière question. La vidéo, j'aime beaucoup la vidéo. Est-ce que la vidéo est disponible? Est-ce que ça été déposé sur votre site?

M. DÉSILETS : Mario Désilets pour le verbatim.

On va la déposer sur notre site Web, et la vidéo va être disponible pour tout le monde.

LE PRÉSIDENT : Alors, merci beaucoup.

Alors, merci beaucoup pour cette présentation.

Et pour vous, premièrement, bienvenue, Monsieur Poulin. C'est une bonne job, n'est-ce pas?

Et pour vous, Madame Pelletier, ça été vraiment un plaisir de vous voir ici, particulièrement dans l'audience publique à Bécancour. Je n'ai jamais oublié cette occasion. Alors, bon voyage et bonne retraite.

MME PELLETIER : Je vous remercie beaucoup, infiniment, tous.

LE PRÉSIDENT : O.K. C'est fini maintenant.

What are we going to do now?

MR. LEBLANC: We are going to take a 10-minute break and we are going to resume in a private closed session.

THE PRESIDENT: On the --

MR. LEBLANC: Yes, we are going to go into a different room.

Donc, merci à tous. N'oubliez pas de remettre vos appareils d'interprétation. Sinon, vous allez partir sans une carte très importante.

--- Rires / Laughter

M. LEBLANC : Merci. Au revoir.

LE PRÉSIDENT : Merci beaucoup.

--- Whereupon the meeting adjourned at 4:55 p.m., to resume on Thursday, December 18, 2014 at 9:00 a.m. /
La réunion est ajournée à 16 h 55, pour reprendre le jeudi 18 décembre 2014 à 9 h 00