

Canadian Nuclear
Safety Commission

Commission canadienne de
sûreté nucléaire

Public meeting

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Le 22 juin 2016

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

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

Commission Members present

Commissaires présents

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

M. Michael Binder
D^r Sandy McEwan
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Secretary:

Secrétaire:

Mr. Marc Leblanc

M. Marc Leblanc

Senior Counsel:

Avocat principal :

Mr. Denis Saumure

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Ottawa, Ontario / Ottawa (Ontario)

--- Upon commencing on Wednesday, June 22, 2016,
at 2:06 p.m. / L'audience débute le mercredi
22 juin 2016 à 14 h 06

CMD 16-M19

Ouverture de la séance

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

We have simultaneous interpretation.
Please keep the pace of speech relatively slow so that the
interpreters have a chance to keep up.

Des appareils pour l'interprétation 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 la semaine prochaine, peut-être
la semaine après compte tenu de notre timing.

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 those joining us via our 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 already heard from our Commission Secretary, Marc Leblanc.

We also have with us here today, Monsieur Denis Saumure, Senior Counsel to the Commission.

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

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

In addition to the written documents 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.

Monsieur le Président...?

CMD 16-M20.B

Adoption of Agenda

THE PRESIDENT: So with this information, I would now like to call for the adoption of the agenda by the Commission Members, as outlined in Commission Member Document CMD 16-M20.B.

Do we have concurrence?

For the record, the agenda is adopted.

CMD 16-M21

Approval of Minutes of Commission Meeting

Held April 6 and 7, 2016

THE PRESIDENT: Now I would like to call for the approval of the Minutes of the Commission meeting held on April 6 and 7, 2016, as outlined in CMD 16-M21.

Any comments?

Dr. McEwan...?

MEMBER MCEWAN: Thank you, Mr. President. I have one question and one request for clarification.

Paragraph 40, which talks about exposures in mine workers and bystander effect, it's unclear and I think it doesn't reflect what staff explained in a very complicated discussion and I wonder if it would be possible just to get it reviewed and looked at perhaps.

THE PRESIDENT: So why don't we make sure that staff elaborate on the bystander effect and write back to us and we will -- or does somebody want to address it right now? Go ahead.

MS BURTT: Julie Burtt for the record. I just want to say we will do that, we will follow up with you.

THE PRESIDENT: Okay.

MS BURTT: Thank you very much.

THE PRESIDENT: Other comments?

MEMBER MCEWAN: Second, it's just a question related to 44.

It would be, I think, of interest for us to get some feedback when there is more information available on the leak-before-break in India.

MR. FRAPPIER: Gerry Frappier for the record.

Yes, we will make sure that we come back to the Commission when we have more information.

THE PRESIDENT: Thank you.

MR. LEBLANC: So just on this item, it would be sufficient, Monsieur Frappier, if a memo is sent to the Secretary and we will share the information with the Members when available. Thank you.

THE PRESIDENT: Other comments?

Monsieur Tolgyesi...?

MEMBER TOLGYESI: Yes, Mr. President.

In the Minutes, page 12, paragraph 50, this is regarding the accident when a worker received burns while drilling a rotor bore hole and he was burned. There's no comments, updating comments in the Status Report on Power Reactors, but we are saying in this paragraph that:

"The stop work order will remain in place for the Bruce B units until MOL inspectors are satisfied that the appropriate measures have been put in place..."

Could you give us an update where you stand with this?

MR. LAFRENIÈRE: Ken Lafrenière for the record.

The stop work order I believe is still in place. However, it affects future work. The work site has been released and they have completed that outage and the generator is back in service. So the stop work order is more of a longer-term order placed on by the Ministry of Labour to ensure that this will not reoccur again and that involves them completing their investigation, which is still not the case yet, and Bruce Power responding to the findings of that investigation and incorporating any findings in their procedures.

THE PRESIDENT: So will you brief us when it's done?

MR. LAFRENIÈRE: Yes.

THE PRESIDENT: I don't like hanging things that remain unclosed.

MR. LAFRENIÈRE: Ken Lafrenière for the

record.

We will update the status report when that investigation is completed, with the outcomes of the investigation.

THE PRESIDENT: Go ahead.

MEMBER TOLGYESI: What happens if the -- because this procedure is not correct, okay. So what happens if they have to do maintenance on these rotors and how do they do that? What do they do? Or they don't do maintenance work or how do they proceed?

MR. LAFRENIÈRE: Ken Lafrenière for the record.

So, if you recall, this maintenance was a very infrequently performed maintenance activity. It occurs probably at the frequency of once every 10 years. So I believe the complete -- it will not be scheduled in the near future. So that's why it's not closed yet and essentially the investigation is still not complete yet. However, as I committed before, we will get back to you with the closure of that event, but essentially the procedures will be updated to ensure that this event will not occur again.

MEMBER TOLGYESI: (Off microphone). This will become a part of backlog.

THE PRESIDENT: Yes. Well, we would like

an update on this. Even though it's MOL, you know my view on all of this, that you don't leave things open. So I don't know who is pushing Bruce to update so it will be compliant with MOL requirements. So in the next -- I think it's in August -- when is their regulatory -- August, we would like to hear an update on this.

MR. LAFRENIÈRE: Okay, thank you. Yes, we will update in August.

THE PRESIDENT: Thank you.

Any other comments?

Okay. So for the record, with those changes the Minutes are approved.

CMD 16-M23

Status Report on Power Reactors

THE PRESIDENT: The first item on the agenda today is the Status Report on Power Reactors, which is under Commission Member Document CMD 16-M23.

I understand that we have Mr. Manley from OPG available via teleconference.

Let's test the technology.

Mr. Manley, can you hear us?

MR. MANLEY: Yes, President Binder, I can hear you. Robin Manley, for the record.

THE PRESIDENT: Thank you.

So I will turn the floor over to Mr. Frappier.

MR. FRAPPIER: Thank you and good morning to Mr. President and Members of the Commission.

My name is Gerry Frappier, I am the Director General of the Directorate of Power Reactor Regulation.

With me today are our Power Reactor Program Division Directors plus technical support staff who are available to respond to questions on the Status Report on Power Reactors, which, as you just mentioned, is CMD 16-M23.

The document was finalized on June 20, 2016. I note that all the reactors are operating as expected or in planned outage. There are no Event Notifications or Updates.

I would note, however, that on the report for G-2 the Status Report states we are awaiting a decision from the Commission, but that decision was released today, so we are in the process of reviewing it.

This concludes the Status Report on Power Reactors and we are available for any questions you might have.

THE PRESIDENT: Thank you.

Let's start with Monsieur Harvey.

MEMBRE HARVEY : Merci, Monsieur le Président.

Well, it's a very clean report. I think it's the first time in 10 years that I see such a short report.

Mais j'ai une question, juste une question de suivi. On a eu l'audience avec Hydro-Québec au mois de mai. Il y a eu un communiqué récemment avec la Sécurité publique, Hydro-Québec, mentionnant que les procédures de... Ça touchait à deux choses. Ça touchait les mesures d'urgence et les pilules d'iode.

Ça fait que juste nous rappeler un peu ça. Est-ce que vous avez eu affaire avec ça ou est-ce que ça complète ce qu'on avait entrevu au mois de mai?

M. POULET : Benoit Poulet pour l'enregistrement.

Effectivement, Commissaire Harvey, ça complète le dossier sur le plan des mesures d'urgence. On parle du plan des mesures d'urgence régional qui est hors site de l'installation de Gentilly-2. La décision de ne pas renouveler les comprimés d'iode est basée... Nous étions au courant qu'Hydro-Québec et l'Organisation régionale des mesures d'urgence du Centre du Québec étaient après regarder -- et je ne sais pas si j'ai eu le bon

acronyme là pour ce titre-là --mais l'Organisation régionale du Gouvernement du Québec au plan des mesures d'urgence avait étudié la question des comprimés d'iode et puis qu'ils n'étaient plus requis.

Donc, essentiellement, les comprimés d'iode ne sont plus requis pour la zone externe, ni pour la zone interne. Et puis le plan des mesures d'urgence externe, la zone n'est plus requise. Mais sur le site même, les procédures d'urgence, les mesures en place en cas d'incident sur site demeurent en place et sont la responsabilité d'Hydro-Québec.

MEMBRE HARVEY : Oui, mais les comprimés d'iode, vous n'avez pas d'obligation particulière, les gens vont aller les déposer dans des endroits désignés, mais vous n'avez pas de préoccupation ou d'obligation qui viendrait de la Commission envers Hydro-Québec d'assurer un suivi à cet égard?

M. POULET : Benoit Poulet pour l'enregistrement.

Effectivement, le plan pour traiter la question des comprimés d'iode stable a été revue ici, et puis nous n'avons aucune préoccupation. Le public qui serait dans la zone qui était prévue auparavant ont des endroits pour déposer et retourner les comprimés qui seraient encore en circulation.

MEMBER HARVEY: I have another question for Point Lepreau.

You mentioned that the reactor power is at 92 percent. Is it something that is going to last like this or could it operate to 100 percent?

MR. POULET: I will switch to English.

Once restart occurred, when they started some of the cooling system pumps, some debris that came with the seawater that had been stagnating for several weeks was entrained into some of the heat exchangers for recirculating, cooling the water system. That meant that the capacity for cooling was reduced somewhat. So in order to maintain the temperature margins on the systems they had to maintain power at slightly below 90 percent at first and as they isolated and cleaned the heat exchangers and moved the debris they were able to go up a little bit. They are still proceeding with the isolation and cleaning of these heat exchangers to remove the debris and ensure a full cooling capacity. So we expect that the power will continue to increase as the work progresses. This is an economic issue, not a safety issue.

THE PRESIDENT: Will they obtain 100 percent? Is the plan, is the target to get to 100 percent?

MR. POULET: I expect that they will be

able to reach 100 percent full power operation as soon as the work is completed. I don't have a precise schedule, but it's a matter of I would say probably days, as in one week, before they finish all the work and return the system to full power operation.

THE PRESIDENT: Okay, thank you.

Ms Velshi...?

MEMBER VELSHI: Thank you, Mr. President.

A question perhaps for OPG. I notice all the stations that are -- units that are currently undergoing planned maintenance outages, the outage durations seem rather long, anywhere from 3 to 4 to 5 months. So what's the scope in these outages that require such a long outage?

MR. MANLEY: Robin Manley for the record.

I would say that in general terms the outage scope is that they are normal maintenance outages. From time to time there is some discovery work that occurs that has caused outages to be longer than originally planned and other times there have been, you know, some complications that have arisen as the outage has carried on. However, in these two cases none of that has been safety-related or particularly problematic. We are attempting to complete all of the appropriate work and bring the outages to closure within our committed dates to

the grid.

MEMBER VELSHI: Okay. So just to make sure that I understood what you said. That they weren't initially planned to last this long but it's just as the outage has evolved they have come across certain issues that have taken more time?

MR. MANLEY: Robin Manley for the record.

Let me clarify. I do not actually have in front of me the original completion date for the outage. I apologize, I don't have that one. So I'm not saying that they necessarily are going longer than originally planned as much as that in general terms the duration of an outage has a certain scope and an original committed date and that, you know, sometimes outages do come in a little bit longer than originally planned. And I can provide to CNSC staff, if necessary, details as to where the outages are with respect to the original dates.

MEMBER VELSHI: I think it would be helpful. Maybe you can do that just for the Pickering Unit 8 outage, what the original duration was. I was just surprised to see that all three planned outages have such long durations and that's not typical, is it?

Staff...?

MR. SANTINI: Miguel Santini for the record.

Typically what we do to lower the side on these outages is generate the working scope and then are very vigilant when things are removed from scope. So in general OPG is quite good at complying with the original scope and there must be a reason or a justification for removal from the original scope, particularly for PK.

The one thing that makes the outages a bit longer is because they have more fuel channel inspections than historically they have done. That is extremely dependent on the availability of their fueling machines because those are used for those inspections. So it might happen that there is a compounded effect of more inspections with problems with the fuelling machines or things like that that make the outages a bit longer.

MEMBER VELSHI: Thank you.

THE PRESIDENT: Thank you. Mr. Tolgyesi, pas de questions?

MEMBER TOLGYESI: No.

THE PRESIDENT: Dr. McEwen?

MEMBER MCEWEN: No, thank you.

THE PRESIDENT: Okay, that was easy. I don't know if it's because of you, Mr. Frappier, or if it's because of the luck of the draw.

MR. FRAPPIER: Gerry Frappier, for the record. I'm very sure it's luck of the draw and I'm sure

we'll get to talk a lot more next time we get to meet.

CMD 16-M22

Oral presentation by CNSC staff

THE PRESIDENT: That's good news, though.
That's good.

The next item on the agenda is Information Item to provide us with the technical briefing on management systems in the nuclear industry as outlined in CMD 16-M22.

I will let CNSC staff get set. Stay on the stand there, Mr. Lamarre. You will make the presentation. Over to you.

MR. LAMARRE: Good afternoon, Mr. President and Members of the Commission. For the record my name is Greg Lamarre and I am the Director General of the Directorate of Safety Management.

It is my pleasure and the pleasure of DSM staff here today to be in front of you to take this opportunity to brief you on the topic of "Management systems in the nuclear industry".

On my left are Mr. Pierre Lahaie who is the Director of the Management Systems Division within DSM and Mr. Gabriele Giobbe who is a management system

specialist within the Management Systems Division. They will be presenting today's material.

I will turn the floor now to Mr. Lahaie.

MR. LAHAIE: Thank you, Mr. Lamarre.

Pierre Lahaie for the record.

The CNSC has continued to evolve its understanding and expectations related to licensees' management systems since its introduction into the regulatory framework in 2009.

The objectives of this presentation are primarily to provide fundamental information on the subject of management systems and relate this to the current approach the CNSC has in place for the regulation of licensees' management systems.

All of this, as you will see, is of high relevance to safety in the nuclear industry.

Mr. Giobbe and I will be presenting information on the topics listed in this outline. Mr. Giobbe will begin with some introductory information on management systems as a whole that will help explain how we got to where we are today and further explain how the nuclear industry has adopted management system practices to ensure safety.

Much of this has been informed by the International Atomic Energy Agency guidance and reflected

in the Canadian Standards Association safety standard for nuclear facilities, CSA N286-12.

I will then relate to what the CNSC does to regulate licensees' management systems, compare what we do with other nuclear regulators, and talk about our approach to oversight.

We will conclude with a quick view of what is anticipated in the near future in the area of management system development as well as some Key messages from this briefing.

I will now hand over to Mr. Giobbe who will proceed with the presentation.

MR. GIOBBE: Thank you, Mr. Lahaie.

Good afternoon, Mr. President and Members of the Commission.

My name is Gabriele Giobbe and as Mr. Lamarre stated I am a Management System Specialist in the Directorate of Safety Management.

There are many definitions of management systems in standards literature. For example, the ones developed by the standards organizations identified here.

The wording in the second bullet captures the essence of these various definitions as it speaks to all tasks required to achieve objectives.

The word task includes any activity as

simple as making a decision to the complexity of a large program.

Management Systems and Standards are modelled on the Plan/Do/Check/Act approach originally developed for quality and commonly referred to as the Deming Wheel.

This approach has been a key driver in the evolution of management systems from quality control to integrated management systems.

Since early history quality control has been associated with verifying that an item has met a specification. This was the primary means of meeting requirements. In time, this was seen as risky and wasteful.

With that in mind, the concept of quality assurance became widely practiced as a means of ensuring Processes delivered expected results consistently. This was accomplished by incorporating practices that enabled better management and control of processes.

These practices were further evolved into the broader quality management approach often associated with total quality management where quality assurance principles were applied more broadly and at higher levels in the organization.

Today, we are at the phase where a single management system can be implemented that incorporates

quality control, quality assurance and quality management principles to achieve all of the organizations' objectives.

An Integrated Management System is a means by which an organization, through the systems approach implements practices that are applied across an organization to achieve all of its objectives and meet requirements.

The blue Venn diagram at the center of the slide serves to illustrate how the principles of quality control, quality assurance and quality management have served as the building blocks of an integrated management system.

This evolution has seen the accountability for management systems shift, in practice, from the quality organization to top management.

It is important to note that in keeping with this evolution, the IAEA and CSA Standards on Quality Assurance for Safety Related Systems and Activities has evolved to Management System Standards that integrates all requirements while maintaining safety as the paramount consideration.

In order to better understand how the principles of quality control and quality assurance are included in management systems as shown in this

hypothetical model. It is useful to consider them in practical terms as captured by management processes.

Quality control is the primary means of verifying that an item or a process output meets a specification by direct comparison to that specification. On its own, quality control provides little if any focus on safety and does not have much impact on safety performance.

When the practice of verification during or at the end of a process is included with key quality management processes which are common to quality assurance standards, better management and control of processes is assured. These quality assurance processes are the embodiment of the Plan/Do/Check/Act approach that provides assurance of consistent results in meeting requirements. When applied to safety related items and activities as they are in the nuclear industry, these processes have a greater influence on safety.

An integrated or single management system builds on the principles and processes of quality control and quality assurance by applying them to all activities while upholding the principle that safety is the paramount consideration in all decisions and actions.

In an integrated or single management system there is also a broadening in the application of quality management processes, such as non-conformance and corrective actions

to an overall process on problem identification and resolution.

Equally as important is the addition of self-assessments and use of experience which are beneficial to ensuring continuous improvement. These additional practices and the incorporation of the key principle of safety enable an increased focus on safety with an expected increase in safety performance.

A well designed and effectively implemented management system provides many benefits to an Organization as outlined here. Additionally, a management system also provides order and structure to ensure that the management system can provide the right information at the right time in order for the right decision to be made.

From a regulatory perspective, it is very important that an organization ensure consistency in achieving objectives and in meeting requirements, that the organization demonstrate compliance to the regulator and identify all risks and implement mitigation measures.

A management system is typically modeled on a standard which identifies various requirements. This model contains generic elements that are common and core to many standards.

The generic elements listed here are in

line with the Plan/Do/Check/Act as discussed earlier. This model can be found, for example, in management system standards for quality, environment, occupational health and safety and numerous others.

By implementing management processes aligned with these core elements, a single or "integrated" management system may be developed.

So what is meant by the term integrated management system? An Integrated management system is comprised of all the generic management processes and practices as well as the specific processes and practices to meet the requirements of one or more management system standards.

The term "integrated management system" is used to denote a management system that integrates the sector specific requirements into a single management system.

This illustration is an example of an organization that needs and wants to meet the requirements for quality, environment, occupational health and safety and security. An organization can choose to manage these activities separately, as shown by the middle grouping, or an organization can choose to consolidate the generic requirements into a single set of management processes which are applied to all specific processes aimed at

achieving the various requirements as shown by the larger circle on the right.

One very important benefit in consolidating or integrating the management system is having the management ability to assess and improve on all objectives in an integrated manner. This allows for better comprehension of how decisions made for one set of requirements could impact others.

This is the approach the IAEA adopted as a means of enhancing safety.

The IAEA document entitled "Fundamental Safety Principles" is the central set of expectations within the IAEA's framework of safety requirements and safety guides.

Principle 3 of this fundamentals document highlights the expectations of a management system in that leaders are engaged, the management system is effective, it integrates all aspects of management for safety, promotes a safety culture, provides for the assessments of performance and the use of lessons learned from experience.

These management system expectations were further explained in a safety requirements document GS-R-3.

The IAEA published the safety standard GS-R-3 titled "The management system for facilities and activities" in 2006. Since its publication, it has been

adopted by numerous member states as a management system model.

GS-R-3 requires that an organization integrate the requirements for safety, health, environment, security, quality and economics into a management system. This is to ensure safety is properly considered in all activities by giving it paramount consideration.

As an aside, we should mention that the IAEA also expects member state regulators to adopt GS-R-3 as the guidance for their own management system. It is worth noting that the CNSC's management system is aligned with GS-R-3 and was evaluated as meeting all the requirements by the IRRS mission in 2011.

The CNSC understood and accepted the benefits of this approach for the regulation of licensees' management systems and adopted it in 2009 when the Safety and Control Area of "Management Systems" was introduced into the regulatory framework. This was an evolution from the previous requirement for quality assurance.

There was a similar realization within the Canadian nuclear industry that this approach should be reflected in the Canadian management system standard CSA N286.

The CSA standard N286-12 titled "Management System requirements for nuclear facilities" was

published in June of 2012 and has been adopted by the CNSC as the standard of reference for all Class 1 and Uranium Mines and Mills licensees.

This latest version of N286, prepared and accepted by a cross-section of the Canadian nuclear industry, is the first to have its scope expanded beyond nuclear power plants. It is aligned with the principles of the IAEA guidance and represents industry best practice.

The N286 standard integrates requirements from other management system standards for quality, health and safety, environment, economics and security.

This was accomplished by considering a number of management system standards, including GS-R-3. As a result, a key principle of the standard is to ensure that safety is a fundamental consideration in all activities.

As with its predecessors, this standard applies to the life cycle of a nuclear facility from conception through to decommissioning.

A commentary document to the CSA N286-12 standard was also published to provide background information helpful for the implementation of a management system in line with the intent of the standard.

We mentioned earlier that the structure of a management system standard can provide a sound model for

an organization's management system. This is equally true for N286.

As shown by the triangle on the left-hand side, the CSA N286-12 standard consists of a set of 12 principles supported by 12 generic requirements and a set of specific life cycle requirements classified by facility type.

The structure of the N286-12 standard is simple, yet provides for a comprehensive application of Management System Principles in all activities.

These principles are incorporated into the Generic Management Process Requirements and are considered when these are put into effect. Both the principles and the supporting generic elements apply to the life cycle specific requirements.

This structure aligns well with what is considered a typical or ideal management system as depicted by the triangle on the right.

This relationship of the upper tier policies to the second tier management processes are incorporated into procedures and work instructions. This relationship aligns well with the structure of the N286-12 standard.

An example of how this works would be in the supply chain.

Organizations normally have a quality policy as a top tier document that applies to all procured items and services. The procurement process, which lines up in the second tier of the triangle on the right side, will emphasize the importance of ensuring quality through key activities such as supplier qualification, ongoing supplier survey activities, receiving and incoming inspections and storage.

The bottom tier of the triangle will include procedures for incoming inspections which will include work instructions on how to identify non-conforming as well as suspect items and how to follow up to determine if there is counterfeiting or fraud involved.

Understanding the structure and the intent of the CSA N286 standard is useful when considering how the CNSC regulates and sets expectations for licensees' management systems.

And now Mr. Lahaie will continue with this briefing.

MR. LAHAIE: Now we turn your attention to how the CNSC regulates licensees' management systems.

This slide illustrates an example of the CNSC regulatory framework for nuclear power plants as it applies to management systems.

The Class 1 regulations state that an

application for a licence must contain a description of the proposed quality assurance program for the activity to be licensed.

In 2009, the licence condition associated with the Class 1 regulation for a QA program was updated to a licence condition for the implementation and maintenance of a management system. We should note here that, in keeping with this change, the regulations for Class 1 and uranium mines and mills are in the process of being updated to express a requirement for a management system.

The Licence Condition Handbook referenced in the licence, contains further expectations on the scope of the licensee's management system as well as the standard to be used.

Under the Safety Control Area of Management Systems, a Licence Condition Handbook for an NPP, the example here being the latest Darlington nuclear, details the CNSC expectations for the performance objective, management system requirements and associated compliance verification criteria.

The performance objective is for an effective management system that integrates provisions to enable the achievement of safety objectives, ongoing performance monitoring and maintaining a safety culture.

The management system requirements

preamble includes "a commitment and adherence to management system principles and the establishment of processes to achieve the desired results".

It also states that the CSA N286 standard contains the requirements for a management system throughout the life cycle of a nuclear power plant that extends to all safety and control areas.

For the compliance verification criteria, it states that the management system shall comply with the requirements set out in CSA N286, "Management system requirements for nuclear facilities".

So how does the CNSC's approach to regulation of management system compare internationally with other nuclear regulators?

A recent benchmarking exercise provided us the comparison presented here.

For the U.S.A. and other IAEA member states having a similar regulatory model for management systems, such as Korea and Japan, the requirement is for a prescriptive quality assurance program for safety-related items and activities. There isn't a stated requirement for a management system applying to all licensed activities.

The USNRC endorses the American Society of Mechanical Engineers quality standard, NQA-1, as a model for meeting their regulatory requirement.

It should be noted that the USNRC has a regulatory guide entitled "Quality Assurance Program requirements for Operation". In it, they state that this guide incorporates administrative and quality assurance controls for the operational phase which is consistent with the basic safety principles provided in the IAEA Safety Standard GS-R-3.

Regulators in Europe, such as in the UK, France and Finland, require the implementation of a management system, often citing GS-R-3 as a standard that should be taken into account. The requirement is for licensees to have a management system that gives due priority to safety. Each has their own way of specifying this.

For example, the Office for Nuclear Regulation, ONR, in the UK state that:

"The licensee shall, within its management system, make adequate quality management arrangements in respect of all matters affecting safety and that these arrangements be based on current national or international quality management system standards."

They then cite GS-R-3 as relevant good

practice and other standards, such as ISO 9001, may be used provided they demonstrate how it is applied to "all matters that may affect safety."

In Canada, as we have seen, the CNSC requires Class I and UMM licensees to have and maintain a management system as a licence condition, supported by a requirement to adopt CSA N286, which is an industry consensus standard which applies to all licence activities. In our view, this places the CNSC as a leader in the regulation of management systems and management system expectations.

One way of visualizing the CNSC expectations for licensee management systems is to view the management system as the umbrella which governs all licensed activities. The management system standard is often referred to as an umbrella standard.

Licensees are expected to implement and control activities aimed at fulfilling the requirements of various standards and REGDOCs in accordance with their management system.

The licensee's management system extends to all safety and control areas across all life cycle activities, which include design, procurement, construction, commissioning, operation, and decommissioning.

The diagram in the bottom right is a simple illustration depicting the management system processes which extends to all safety and control areas and associated specific areas.

The CSA N286 standard which has been adopted by nuclear power plant licensees as well as other Class I, UMM, and waste licensees represents the industry current best practice for management systems. It includes a set of principles fundamental to management processes and features important to ensuring overall safety.

The CNSC's expectations for licensees are that they adhere to the principles listed here as the basis of their management system and the corresponding management processes.

The first two principles are aimed at ensuring that safety is properly considered in all decisions and actions, and that licensees are expected to design, plan, and control their activities to meet all requirements.

As captured in the next three principles, this includes ensuring the organization is aligned and able to establish, communicate, and achieve the objectives and priorities it sets for itself.

The rest of the principles are meant to ensure that processes are established for managing

activities consistently, for verifying that the desired objectives and requirements are met, and for self-correcting to address deficiencies and to improve.

These principles are captured in the current version of the management system standard and are further expanded in a corresponding set of generic requirements.

A management system implemented in accordance with these principles and requirements has features to assure good safety performance.

The current best practice for management systems in the nuclear industry is to have features conducive to the management of activities for good safety performance in meeting objectives.

As we mentioned earlier, in order to achieve this, it is necessary to ensure safety is of paramount consideration in all activities.

It is a responsibility at the highest level of management to ensure this is well communicated and supported by the organization in order to better understand and promote a safety culture.

Organizations should develop a single management system that integrates all management system requirements as this contributes to optimal performance by emphasizing that all activities and decisions can have an

impact on safety.

The management system must apply to all life cycle activities whether they are conducted by the organization or for the organization by a contracted external party.

With a graded approach, management system requirements may be implemented to the extent commensurate with the complexity and safety significance of the activity.

The management processes in place for assessing and reviewing performance are instrumental in understanding the thoroughness of the management system in promoting and supporting human performance.

The relationship of the management system to the safety culture and human performance is key in delivering good safety performance.

The management system sets expectations for and supports human performance and safety culture by providing the mechanisms by which an organization can plan, do, assess, and correct its activities to meet requirements and improve on performance.

In this way, the management system is the vehicle by which safety is managed, performance is optimized, and safety culture is further enhanced.

CNSC Staff verify licensees' performance

and compliance with requirements through a number of compliance activities.

Desktop reviews of licensees' management system and process documentation is conducted periodically to ensure the requirements are addressed and that changes to these do not negatively impact safety.

Compliance inspections on key management processes and life cycle activities provide the assurance that these activities are conducted in line with requirements.

In many cases inspections conducted on specific licensee processes capture information regarding generic management processes, such as organization; information management, which is primarily document and records control; resources, as demonstrated through training; change management; and problem identification and resolution.

The reports produced are reviewed to capture the common management process information for trending.

Similarly, all event reports from nuclear power plant licensees are reviewed for a similar purpose: trending of management system elements that may be deficient.

Ultimately, CNSC Staff make good use of

compliance information as a source of feedback on the performance of the management system, which is a good leading indicator to potential performance issues.

So what's next for management systems in the ongoing evolution at the CNSC?

CNSC Staff contribute on an ongoing basis to the evolution of the CSA N286 standard.

The CNSC is embarking upon the process of writing a REGDOC on management systems to reaffirm and clarify expectations for licensees.

As mentioned earlier, the Class I and *Uranium Mines and Mills Regulations* are being amended to reflect a requirement for a management system for the licensed activity.

CNSC Staff have contributed actively to the development of the IAEA standard for management systems. GSR Part 2, entitled "leadership and management for safety," was recently approved by the IAEA Board of Governors and is expected to be published in the next year. As the title suggests, there is an increased focus on the role of leadership for safety.

The ISO 9001:2015 standard, published recently, also has incorporated requirements for the leaders of the organization.

CNSC Staff stay current with management

system best practices, with particular attention to developments that can further enhance safety.

There are a number of key messages in this presentation, and we have chosen to highlight a few here as a conclusion.

We want to emphasize in particular that:

- Safety is a paramount consideration in all decisions and actions. The management system has safety as a fundamental deliverable
- Management system requirements apply to the life cycle activities, as well as to all safety and control areas
- The evolution of standards from quality control to integrated management systems was driven by the expectation that it would result in improved performance and safety
- There is a direct relationship between an effective management system, excellence in human performance, and safety culture
- The CNSC oversight of licensee management systems is comprehensive and integrated and provides information indicative of potential performance issues
- And, as a concluding key message, the CNSC is leading in its approach to regulation of licensees'

management systems through its adoption of industry best practice.

Thank you. CNSC Staff are now available for questions.

THE PRESIDENT: Thank you.

So let's jump right into the questioning session, starting with Ms Velshi.

MEMBER VELSHI: Thank you, Mr. President.

Thank you for a very thorough and informative presentation.

In your presentation a number of times you've said that the CNSC is kind of leading in this area of integrated management system.

If we were to maybe ask others, is there any other industry that's big on integrated management system? Do others come to the CNSC to see, you know, what you're doing and benchmark against us? What makes you think you're the best?

MR. LAHAIE: Pierre Lahaie, for the record.

So as mentioned in the presentation earlier, we've done a comparison with other nuclear regulators and we find that a number of member state regulators are focused in on quality assurance of safety-related items and activities. That doesn't

necessarily address the broader perspective of safety in all decisions and actions. We adopted this in 2009, in terms of our approach to regulating licensees' management systems.

As far as other industries go, for example *Onshore Pipeline Regulations*, were just recently, I believe in 2013, updated, are actually management system standard requirements in the regulations that compare well to what we're talking about here.

And in 2015, in the Transport Canada area for regulation of railways, there's a new set of regulations for safety management systems which is fairly comprehensive and now broadens the application of safety management systems to all regulatory requirements.

So when we say we're leading, we definitely can say with a high level of confidence that we're leading in the nuclear sector. When we compared ourselves, at least nationally, with other regulated high-reliability industries, we implemented this ahead of other organizations who may have learned from unfortunate events.

MEMBER VELSHI: So the chemical industry is kind of known to be a leader in this areas. Have you looked to see how they have adopted this integrated management system model?

MR. LAHAIE: We haven't looked at any other industry specifically. However, we are very aware that numerous industries are compliant with various ISO, for example ISO standards, and there are now standards that can help an organization integrate their requirements in order to be more efficient, more effective. So I think that large mature organizations are taking this practice on because there are obvious benefits from an efficiency perspective, but it also makes them more effective. So I believe that a lot of industries are taking on this approach.

MEMBER VELSHI: Thank you.

And a very quick question. Is leadership one of the specific areas under management system currently for us?

MR. LAHAIE: I think leadership is embedded into a number of specific areas under management systems, for example, in safety culture or even in organization. When we look at the actual requirements in the standard, there are specific requirements for leaders in the organization and they have actual accountability for the management system. So they are called into a very senior role with the implementation of the management system.

THE PRESIDENT: But just to follow up on

that one, why did the IAEA all of a sudden, the last couple of weeks, announce that senior managers in the leadership -- what did they discover new that they had to come up with a new ruling about the role of senior management and leadership?

MR. LAHAIE: Pierre Lahaie for the record.

So the IAEA in their GS-R-3 standard highlighted that it was senior management's responsibility to ensure that an effective management system was in place. When they undertook to update that document and link it better to the safety fundamentals document that talks about leadership and management for safety, the decision was to address leadership through expected behaviours.

That was highly reinforced by the unfortunate events at Fukushima in 2011 which occurred during the development of the standard. So there was even a firmer resolve through the IAEA and member states that leadership attributes should be described in a little more detail in the standard. And we are seeing that actually as a trend with other standards, including the ISO Standards, so it's becoming more of a common practice.

THE PRESIDENT: Thank you.

Monsieur Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président.

On your slides 16 and 17 you are mentioning that according to these slides this management system is compulsory in the U.K., France and Finland. It's required in Canada for Class 1 and UMM licensees, whereas in U.S., Korea and Japan it's not required, or it's not compulsory.

Since IAEA adopted the integrated approach in 2006, are there any enforcement actions that oblige the implementation of these systems or is every country going as it wishes?

MR. LAHAIE: Pierre Lahaie for the record.

So from the IAEA perspective, it conducts IRRS missions of various member state regulatory bodies to evaluate how they are implementing requirements for licensees that are in line with IAEA governance and guidance. Some countries, as I mentioned, the U.S.A. for example, have not shifted from necessarily a high focus on quality assurance but have demonstrated through guidance and through some of their other documents that they do apply principles within GS-R-3 in various methods. What they don't have is a consolidated view of a requirement for a licensee that talks about a management system that applies to all activities. So I believe that a number of regulators are very comfortable with what they have in place and they will or they do include other documentation,

other guidance to demonstrate that they are actually applying the IAEA guidance and the principles.

MEMBER TOLGYESI: What about another couple of dozen countries which have nuclear systems, how do they react? You know, what's the obligation of IAEA to impose, because they are members, all these other countries? I'm talking about other ones like when you look in Europe, Hungary or Russia and Pakistan and all other countries, do they commit themselves to use these systems or should they, and there is some enforcement action that we're saying that if you don't do that, there is a consequence?

MR. LAHAIE: Pierre Lahaie for the record.

The IAEA doesn't actually enforce its guidance on any member states. They do, however, highly encourage that best practices be incorporated into member state regulatory bodies and a lot of member states participate in developing these documents, these guidance documents and requirements documents at the IAEA. The IAEA has, I mentioned earlier, the IRRS mission to assess how a regulator is doing and they do recommend to the regulators how they can improve.

There is also the Convention on Nuclear Safety where member state regulators come together and talk about their approach to regulation and actually compare

what practices are working the best. So I think it's through a peer, if you will, a peer regulatory review process and sharing information amongst regulatory bodies that ultimately the best practices make sense and are adopted.

MEMBER TOLGYESI: Actually --

THE PRESIDENT: I think somebody wants to jump in.

MEMBER TOLGYESI: Oh, sorry.

MR. FRAPPIER: Thank you. Gerry Frappier for the record.

I just wanted to emphasize Pierre's point about the Convention on Nuclear Safety. Every few years the IAEA pulls together member states and it's quite -- it's designed so that each member state will have a very tough peer review from several other states. There will be lots of questions back and forth on how they implement management systems and other safety areas and they are expected then to be able to respond and have to respond in written form as to where they are at with different aspects of the IAEA standards and fundamentals.

MEMBER TOLGYESI: You know, what you are saying, that in Canada the management system requirements are limited to Class 1 and UMM licensees. Is it the intention of CNSC to extend this obligation to other

sectors of the industry?

MR. LAHAIE: Pierre Lahaie for the record.

The CNSC adoption of N286-12 and management system requirements right now is primarily for Class 1 and uranium mines and mills. We are in the process of rolling that out for waste licensees as well.

I will ask Mr. Colin Moses to add any details here in terms of Class 2 and nuclear substance licensees.

MR. MOSES: Colin Moses, Director General of Nuclear Substance Regulation, for the record.

So, as Mr. Lahaie mentioned, right now the standard and the requirements are really designed for application in larger facilities like the Class 1 and the UMM. But with that said, the principles or the key elements of a management system that are reflected in this presentation are reviewed when we consider the radiation safety manuals that are being proposed for licensees that are regulated under our Directorate to ensure that (a) there is a strong management commitment to safety and (b) that the systems and the programs that they have put in place are sufficient to ensure that they can adequately -- that they have the structures to ensure that there is appropriate safety in place at the licensed activities.

THE PRESIDENT: Dr. McEwan...?

MEMBER MCEWAN: Thank you, Mr. President.

Maybe I could just follow on from that a little bit because it was something that occurred to me. All of the activities that you regulate in the DNSR are part of large organizations, universities, hospitals, and it seems to me that you are really dealing with often conflicting -- I'm going to use the term very loosely -- management system requirements for the regulation of the nuclear substances that are used and then the overall management systems that run those large organizations.

How do you resolve conflicts between the two and how do you ensure that the needs of the nuclear substance safety piece are not subservient to or subsumed by other organizational issues?

MR. LAHAIE: Pierre Lahaie for the record.

For the less complex, less safety significant licensees, we don't see it as a conflicting requirement, we see them as more complementary. So often, the licensee will adopt a large organization management processes for things like training, procurement, a variety of things, and within their licence will have specific processes to address direct safety areas such as radiation protection, et cetera, et cetera. So they are actually complementary as opposed to conflicting. And we have been promoting that view with a number of licensees, for example

slowpoke operators who fall under that kind of a model and it's really clarifying the situation for them.

MEMBER MCEWAN: So then explain to me how you validate that they are complementary and not conflicting.

MR. LAHAIE: Pierre Lahaie for the record. So in terms of how the large organization's management processes affect the licence activity, that is assessed against requirements and typically those requirements are not in conflict with the larger organization's processes. I'm not sure if that's --

MR. MOSES: Colin Moses for the record. Just to complement that, as part of our review we are looking at the specific radiation safety programs that are put in place in the organizations and, as you can imagine, a number of the elements of those programs, for example training of personnel, are tied into those broader programs that manage the training in the specific organizations.

The other thing we do in the review of the licence applications as well and the programs and systems that have been put in place is that we are looking for a strong senior management recognition of the importance of the program. They are responsible for designation of people with appropriate capacities to oversee the programs

and also an awareness on their part of the requirements that we are setting through our licence for the specific activities that are regulated by the CNSC.

THE PRESIDENT: Jump on it.

MEMBER MCEWAN: I was going to bring this up in one of the later CMDs. I think it is for a future discussion but I must confess I am not convinced that there is complementarity in many of the large organizational structures and I think it would be perhaps helpful to have a much longer discussion around those specific issues of a more prescriptive approach to the integration of some of the activities and what we would consider to be a satisfactory management system for radiation safety.

MR. LAHAIE: Pierre Lahaie for the record.

If I can just add to our previous response with a little context here.

If you look at the principles behind the safety -- behind the management system, there is a set of 12 principles and any high reliability organization is meeting those principles. That's where we start when we look at what the large organization is providing to the licensee, for example, in terms of support processes. It is hard to argue that any of those principles are not in place. So that's when we see the commonality. In terms of the actual close-to-safety activities that a licensee does,

we are very prescriptive in what we require them to do.

THE PRESIDENT: But I think what Dr. McEwan is alluding to is you take a big large hospital -- I don't know if you have experience with management systems in hospitals -- they can withstand a lot of improvement. As a user, let me put it this way. But whether their management system for their hospital health is consistent with the safety culture of nuclear, I think that's what is being discussed here. And you can have a situation where health trumps -- I'm talking about the hierarchy, governance, who is responsible to whom, what is the role of the RSO. All of those issues in a very large organization are very complicated and I think it will be good for us to have a session just on the governance model for universities and hospitals with respect to safety culture and management systems.

MR. MOSES: Colin Moses for the record.

And not to drum up excitement for our annual report which we are presenting in September, one of the things we have added to the report this year is a specific discussion on management systems and licensee performance in that regard. So I think that would be a very appropriate place for that conversation.

THE PRESIDENT: That will be very useful.

MR. LAMARRE: Greg Lamarre for the record

as well.

Since, Mr. President, you mentioned safety culture, as you are well aware, we also have a safety culture REGDOC that's in draft and about to go out for public consultation that will touch all the suite of different class of licensees from the biggest Class 1's all the way down to the substance licensees with some more I wouldn't say prescriptive but a little bit more detail in the Annex in terms of how that would be applied to a very small, simple facility. So I think we are going to get to the point of some of your concern on the safety culture piece very shortly through that consultation process.

THE PRESIDENT: Thank you.

Monsieur Harvey...?

MEMBRE HARVEY : Merci, Monsieur le Président.

My question is: What is the load for a facility to go from quality control to an integrated management system? I suspect that this is done gradually but on that path for an accumulation of resources, time, cost and documents. And at the end of the day when you compare where we are now and we were before, what is the difference and what does that represent?

MR. LAHAIE: Pierre Lahaie for the record.
When quality assurance standards were

issued to various industries as a requirement for doing business, they implemented quality assurance programs and documented quality assurance programs and developed quality assurance organizations at what they considered very high cost but it was the cost of doing business. With time, as they got better at understanding the benefits of having quality assurance and the benefits of making improvements to their processes, the benefits of better understanding what the requirements were, the costs were no longer a consideration, those activities became very important.

Similarly, with the movement to management systems, or integrated management systems, those same types of benefits have been realized by organizations. So I think the biggest shift was when they went from strictly measuring quality into products or measuring products out to where they started managing processes and realized there were benefits and costs in better understanding customer requirements, and in the case of safety, better safety performance.

MR. LAMARRE: Greg Lamarre for the record.

If I can also complement Mr. Lahaie's comments. He mentioned during the presentation that this is a journey that began at the CNSC a little bit before but officially in 2009 when we moved to management systems. It is important to note that for the largest licensees, the

NPPs, they already had management systems in place at that time. The CSA standard at the time, the N286, was in fact codifying that which was already in place within the industry.

So this is an area, an example in which the industry was already realizing the benefits for their own purposes of going to an integrated management system. The standards and the requirements were somewhat catching up, at least with that class of licensee there.

So, you know, that would be an interesting discussion I think to have with the licensees, maybe at the time of the annual report, but clearly by their performance in moving to management systems well before 2009 they were already internally realizing some benefits from it.

MEMBER HARVEY: Well, would you say that they are happy with the integrated management system and they won't let it go and go back to another system?

MR. LAHAIE: No, I don't anticipate any licensee would do that. They have all the processes in place and are realizing the benefits of this approach. I doubt very much they would want to go backwards to doing something less.

MEMBER HARVEY: But you're talking of benefits. Have you ever compared the situations before and now and have a list of the benefits coming out from that

integrated management?

MR. LAHAIE: We kind of highlighted the benefits of having a management system in the presentation. I think that list of benefits can be sector-specific to any one element such as quality or environment, but that set of benefits applies to an organization as a whole. So being consistent, delivering on requirements and objectives, meeting requirements and demonstrating that you are meeting requirements, be they regulatory or a customer's requirements, are very important for operation in a high reliability industry like the nuclear, as well as being in business. So there are numerous benefits to having a management system approach.

MEMBER HARVEY: Thank you.

THE PRESIDENT: Back to Ms Velshi.

MEMBER VELSHI: Thank you.

On Slide 24 on What's Next, the REGDOC that you are in the throes of preparing, 2.1.1, some more clarification. It's not as though you are coming up with new requirements, it's just that putting what's in a licence or a Licence Condition Handbook you are now putting in a REGDOC?

MR. LAHAIE: Pierre Lahaie for the record.

That is correct. The REGDOC will reflect the current requirements for management systems for

licensees. It will present an opportunity to clarify certain things such as best practice and giving some guidance on better approaches to meeting requirements potentially, but it is going to be reflecting the requirements we have in place now.

MEMBER VELSHI: Would you await the IAEA's new document before you finalize yours in case there is some great wisdom in that one that you want to capture?

MR. LAHAIE: Pierre Lahaie for the record.

So we were heavily involved in development of GSR Part 2. As a matter of fact, I think we were the -- Canada was the largest contributor in terms of feedback and input to the original drafts and so on. So no, we are not expecting that we will have to make any modifications based on that. I think our current best practice is now reflected within GSR Part 2.

MEMBER VELSHI: And if a facility is in compliance with whether it's CSA N286-12 or the new REGDOC that's coming up, would they be eligible for certification under, you know, the different ISO standards with just a little bit of tweaking or is there a whole lot more effort required to get certification?

MR. LAHAIE: Pierre Lahaie for the record.

Actually, a lot of our licensees are already certified to ISO 9001, 14001, 18001 for those

various sectors as a need to conduct their activities. So what the management system brings is one set of management processes that apply to all of those specific requirements.

MEMBER VELSHI: Right. But I'm asking the question slightly differently, because they probably got the certification first, or in parallel or independently, but if you were a new facility, how would that -- is there harmonization?

MR. LAHAIE: Yes, there is harmonization. So if a new facility is looking to meet the requirements of those standards, there are now good documents that describe how you can do that with a single approach. One is the British Standards Institute document PAS-99 that talks about how you can incorporate all of the requirements within quality environment and health and safety into one management system. So there is a lot of good guidance out there.

MEMBER VELSHI: But would the REGDOC give that guidance completely?

MR. LAHAIE: Pierre Lahaie for the record. So an interesting thing about the standard is it does not actually require any licensee to integrate their management systems, it highly recommends it, and there is a reason for that. Some organizations, be they small or configured a certain way, may not want to do that.

As long as they meet requirements, that's what we are interested in as a regulator. So the REGDOC will not do anything different than the standard does. We recommend that licensees integrate.

As Greg mentioned earlier, the evolution of the standard really represented what nuclear power plants were doing, they integrated a while ago. And we are working with other licensees, we are promoting the benefits of it but we are not asking them to do it.

THE PRESIDENT: Thank you.

Mr. Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président.

Just a comment. It will be quite interesting when you are looking at Slide 5, when you are talking about this progression from quality control, quality insurance, the curve, you know, on the X axis you have a time. That will be interesting to see when it happens. Like quality control, was it mantra in the sixties and seventies or later or before and how it was progressing? It is accelerating, you know. That's just a comment to looking at a graphic.

My question was on Slide 14. When you are talking about this triangle, Act, regulations, licences and certificates, Licence Condition Handbooks, does Licence

Condition Handbooks include references to regulatory documents? Yes? If so, should it be on Slide 14 the regulatory framework 3, the two last items interchanged, that after regulations it's a regulatory document and after it's a licence and certificate and licensing handbook?

MR. LAMARRE: Greg Lamarre for the record.

With respect to your comment, the triangle is constructed in the way it is in terms of the power of the requirements, if I can use that term. It's probably not the right one. But all the work of the CNSC is governed by the Act. Under the Act are the Regulations, licences, certificates and Licence Condition Handbooks come next, incorporating the REGDOCs, because without the REGDOCs actually being cited within the licence condition and the Licence Condition Handbook they don't necessarily have the power of enforcement as far as our regulatory responsibilities go.

So the comment is a fair one, but that is the reason that the triangle is constructed in the way it is, that the REGDOCS in and of themselves do not have the power of enforcement until they are specifically referenced within the licence condition and the Licence Condition Handbooks.

THE PRESIDENT: Thank you.

Dr. McEwan...?

MEMBER MCEWAN: Thank you.

There is some interesting language in a couple of the slides. At Slide 10 you say the "management system ensures" and then there are references obviously to leadership in several of the slides. Can a management system ensure or does it require leadership management to actually ensure that the principles espoused in the management system are actually followed through the organization?

MR. LAHAIE: Pierre Lahaie for the record.

So when there is a reference to the management system or licensees' management system here on page 10, it's the implementation of the management system that ensures. Therefore, you are absolutely right, leadership processes to manage and control activities and so on are what in fact ensure safety. The management system is the subject, if you will, in terms of understanding what we are talking about.

MEMBER MCEWAN: So in discussing Slide 21 you mentioned requirements for leaders in your discussion. So in the context of management systems, what are the requirements of a leader in the way you would evaluate an organization in ensuring that there was flow of that integrated system through the whole organization?

MR. LAHAIE: Pierre Lahaie for the record.

It's the responsibility of top management to set mandate, mission, values, priorities for the organization and that is something that the management system needs to represent. They have accountability for the effective implementation of the management system. Therefore, we look for their role in the assessment of the management system and assurance that it is being improved. In fact, in reality what we see when we inspect licensees and their processes with respect to management systems, top management is typically engaged in understanding exactly what we are finding and making a commitment to fixing it.

MEMBER MCEWAN: So what is our power as a regulator if you see gaps or deficiencies in that leadership system and that leadership role in making sure that there is implementation through the organization?

--- Pause

MR. LAHAIE: Pierre Lahaie for the record. This all links back to performance and where we always look at top management, senior management's role related to safety performance. The --

MR. LAMARRE: Greg Lamarre for the record. Perhaps I can help as well. So it's very important I think to position the management system as that chapeau, the umbrella that really flows through all of the safety and control areas.

So when we look at the management system, within the management system SCA, you have safety culture. Safety culture has certain expectations, soon to be more strict requirements on behalf of the organization to have certain actions undertaken by senior leadership that the CNSC will continue to inspect and monitor.

Looking at overall performance, the impact on performance, this is another element that CNSC looks at through its inspections, desktop reviews.

Another more subtle element of your question perhaps when you are talking about the role and actions of leadership and that, when we go and conduct inspections and that, where is the visibility of senior management in terms of the response to that? Clearly, the response back from the licensees comes under the signature of the site VP, the licence holder, as it may. How active are they actually onsite during the inspection itself, during the meetings and that?

So there's a whole bunch of different elements that CNSC looks at. Management system has a very big part to play, safety culture does as well, but right throughout all the other safety and control areas, the role, responsibility and how that role is discharged by senior management is looked at throughout all of those. So it's a multifaceted look in terms of what view CNSC staff

has in terms of whether or not leadership is being appropriately executed, managed to ensure safety at those facilities.

MR. LAHAIE: Pierre Lahaie for the record.

If I may add, now that I have my thought clear, management has the accountability for the implementation of the management system. Therefore, when there are performance issues, it can be related directly back to the effectiveness of senior management.

THE PRESIDENT: Go ahead.

MR. MOSES: Colin Moses for the record.

Not to add too much to the conversation too, but particularly in the *Radiation Protection Regulations* there is actually an express requirement that management establish controls over work practices to ensure that doses are kept ALARA. So that's one that we often see in the DNSR world anyway and if we see poor performance in that area, then we follow on that clear requirement with respect to controls of doses.

MEMBER MCEWAN: So if I could just sort of follow this final thought. You described the umbrella. Does that mean that if there are consistent failings in other safety and control areas there is inevitably some feedback loop into the integrated management systems that mean there was a breakdown in that continuum through the

organization?

MR. LAHAIE: Pierre Lahaie for the record.

So yes, the effectiveness of the management system can be seen anywhere in the organization. So regardless of which safety control area we are actually looking at or inspecting, if issues related to performance are found, they are typically related to either a process that has not been implemented or one that has been implemented poorly and these are failings of the management system.

THE PRESIDENT: Thank you.

Monsieur Harvey....?

MEMBER HARVEY: Just a quick question.

THE PRESIDENT: Gerry, sorry. I skipped on somebody here.

MR. FRAPPIER: Thank you very much. Gerry Frappier for the record.

I just wanted to add that management systems, as was discussed, is a safety control area in its own right. It's in the licence, it is included, there are licence conditions for it. There is an inspection plan that goes on with them. And just like any other compliance area, if there is non-compliance, the whole suite of enforcement is available to us with respect to getting them back into compliance.

And on the last point you were saying, in any of the safety control areas if there is a serious either event or non-compliance, there's quite an effort to find root cause of those, and often in those both the root cause and the fix for the root cause will lead us back to the management system and you will have a procedure change or some new aspect that has to be put in to prevent reoccurrence of the item.

THE PRESIDENT: Thank you.

Monsieur Harvey...?

MEMBER HARVEY: A quick question. It's on page 18 of your presentation, at the bottom of the page. When you say that CSA N286 standard represents the industry's current best practice, is it the nuclear industry, is it in Canada, is it in the world, and how can you say that?

MR. LAHAIE: Pierre Lahaie for the record.

The process of updating developing standards is to capture best practice. That's the norm. So any standard that's being updated looks to current best practice in that sector and incorporates it into the standard. You want to capture what is being done well.

In terms of the statement made in the presentation, we feel that the current best practices in the nuclear industry as defined by regulatory requirements

and as defined by practices within the nuclear sector are actually ahead of the game and are leading in the nuclear industry at large.

MEMBER HARVEY: Thank you.

THE PRESIDENT: Ms Velshi...?

MEMBER VELSHI: No further questions.

Just as you revise or issue your REGDOC, look outside the nuclear industry, there may be other best practices that you may learn from.

THE PRESIDENT: Monsieur Tolgyesi...?

Dr. McEwan...?

Monsieur Harvey...?

Okay, I have one. I understand the theory but all theories are good when they are actually demonstrated in practice. So what I would like to know is at what level of detail do the system and the whole hierarchy get broken down to. So I have actually two questions on this.

First of all, explain to me the difference between CNSC management system and licensee management system and how they interact. I assume that CNSC has its own management system. Who wants to take that?

--- Laughter / Rires

THE PRESIDENT: And how do you do compliance of CNSC management system?

MR. AWAD: Raoul Awad for the record. I am the Director General of Regulatory Improvement and Major Project Management.

Actually, our management system is totally aligned with the GS-R-3, which is an IAEA document and it was reviewed and this alignment confirmed by the IRS mission 2009-2011.

Now, how we are, if you like, we look to the compliance internally with the management system. In each area, each process has something we call self-assessment and we do the self-assessment by process included in the management system and we identify the gap, we identify an action plan and the corrective action, and that is common to all our internal processes.

THE PRESIDENT: So we do self-assessment of our own internal organization system?

MR. AWAD: Yes, we do on all our processes. Our latest one was the inspection training, the training for the inspectors. We just finished the self-assessment and we identified the gap and we will address it through management action.

THE PRESIDENT: So, you know, given that this is so complicated in here, I go down to the bottom of -- pick up an SCA, any SCA. Who constructs within that SCA the theory of the SCA and all the management systems at

that particular SCA? What bumps it up? At what level do you identify what are the systems in that particular SCA and what is the compliance requirement? How low -- what I'm trying to get my mind wrapped around is how low do we go down to describing every SCA, its own internal structure?

MR. AWAD: Let's take one of the SCAs, radiation protection for example. In our management system we have a special process for inspection, and when the inspector goes to inspect the licensee's radiation protection system, they will follow our inspection process.

In the inspection process we have some procedures for the inspection depending if it's Type 1 or Type 2 and we go to the detail and to the work construction that the inspection in place will look at. The inspector, she or he will compare this work construction with the performance of the licensee. Then he will evaluate the adherence of the licensee to the radiation protection principle, to the regulation and to the licensee management system in this area. And then when we have a compliance process, if there is compliance, the compliance process will kick in and will address the non-compliance with the licensee.

THE PRESIDENT: But in building our own as a regulator -- I'm not talking about the licensee, as a

regulator when we build a requirement called SCA, presumably somebody says, okay, this is what we need to monitor and we will monitor it, how often will we monitor it. Where is that theory structured? Who builds it?

MR. AWAD: Actually, the SCA is a parallel totally to our management system. Then when we look to our management system, we look to all our processes. Our processes apply to every safety and control area equally because it's common process when you go to the detail, when you go for a specific inspection, for a specific safety and control area, at this level the difference will be clear if we are inspecting a reactor building, if we are inspecting other -- but the overarching process is the same for all.

THE PRESIDENT: So we went down all the way. So in our management system, our documents that describe our management system, every SCA is described exactly, the system within the SCA, what kind of compliance verification you will need, how often you are going to do it. Is it going down to this work level?

MR. AWAD: Each process within our management system, for example compliance process, we have the overall compliance process and we will go to each safety and control area compliance process and that is where the detail of the CNSC work on the ground is detailed in the work construction. And it's kind of parallel with

overarching processes on top of it.

THE PRESIDENT: Thank you.

Does anybody else have any questions?

No? Okay, we will take, what, a 10-minute break? A 10-minute break, five to 4:00.

--- Upon recessing at 3:43 p.m. /

Suspension à 15 h 43

--- Upon resuming at 4:03 p.m. /

Reprise à 16 h 03

CMD 16-M29/16-M29.A

Oral presentation by CNSC staff

THE PRESIDENT: Okay. We are back.

Sorry, a bit late.

The next item on the agenda is an update on the CNSC response to the forest fires in the Fort McMurray region, as outlined in CMDs 16-M29 and 16-M29.A.

I understand that our own inspector, Mr. Croy online. Oh, I can see somebody here. Can you hear us?

MR. CROY: Thank you, President Binder, I can hear you.

THE PRESIDENT: Okay, welcome. And I

understand, Mr. Colin, you are going to make the presentation. Over to you.

MR. MOSES: Thank you, Mr. President, Members of the Commission.

I am Colin Moses, Director General of the Directorate of Nuclear Substance Regulation. We are here today to report on the CNSC's response to the recent forest fires that affected the City of Fort McMurray, as described in CMD 16-M29.

With me here today are:

Mr. Henry Rabski, Director of the Operations Inspection Division, Mr. Luc Sigouin, Director of the Emergency Management Programs Division and, in addition, as noted, we have Mr. Charles Croy, an inspector in the Operations and Inspection Division, connected via video conference from the CNSC's Western Regional offices, and Mr. David Wallace, a CBRN Program Officer in EMPD. Both of these participated in the onsite response. We also have other CNSC staff who supported us from here.

Before moving to our report, I would just like to note that while the requirements established by the CNSC and the actions of our licensees ensured that all nuclear substances in the affected area were secure, the conclusions we are reporting today are primarily due to the heroic efforts that were undertaken by first responders in

fighting the fire which resulted in the successful containment of the fires, and prevention of a more significant disaster.

The role played by the CNSC staff throughout this event was focused on providing support to these first responders, through ensuring that they were aware of any potential risks that they could encounter during their response efforts, and laying the groundwork for recovery efforts.

I'll now turn the presentation over to Mr. Rabski.

MR. RABSKI: Thank you. For the record, my name is Henry Rabski.

Located in the northeastern sector of the province of Alberta, Fort McMurray is an urban service area with population reported at 73,000 situated within the Regional Municipality of Wood Buffalo. Fort McMurray is home to many people and companies that perform or support work related to the oil sands operations in Northern Alberta. The refineries are located primarily to the north of the town but also to the south. A map which will be shown later in the presentation depicts the locations of the operating oil refinery facilities.

On April 30th, 2016 a significant forest fire was reported burning to the north of Fort McMurray.

The fire grew rapidly and moved quickly towards the community.

On May 3, 2016 the Regional Municipality of Wood Buffalo issued a mandatory evacuation order for the entire downtown and lower town area of Fort McMurray. The fire continued to grow and move into the community and the evacuation order was extended to include the entire town of Fort McMurray and some of the neighbouring communities. The refinery sites located to the north and south were not part of these initial evacuations. CNSC staff confirmed that the refineries were operating and monitoring the status of the fires closely.

When the evacuation was declared by the Municipality, leveraging our databases that detailed the locations and inventories of nuclear substances and radiation devices being used by licensees, CNSC staff identified 48 licensees that were operating in Fort McMurray and the surrounding areas using 92 locations for the purpose of storing and operation.

In and around Fort McMurray, licensees work primarily in the industrial sector conducting activities associated with the recovery and refining of petroleum products. These facilities require significant infrastructure to support the industry itself and the associated workforce. CNSC staff reviewed the registered

inventory of licensees with operations in and around Fort McMurray and identified the following radiation devices in use.

On the far left of the slide is an industrial radiography camera used to perform non-destructive testing at the industrial sites, pipelines and metal fabrications shops. The nuclear substance used in the device is Iridium-192, and is a Category 2 source according to source categorization established by the IAEA. These are considered high risk devices based on the source's strength, application, and portability.

The next device is a portable gauge typically used in roadwork and construction site activities. These devices generally contain Americium-241/Beryllium sources and Cesium-137 sources. They are considered Category 4 sources and are considered low risk.

Next is an image of a typical fixed nuclear gauge. The oil refinery facilities employing these devices were not affected by the fires. Typically the gauges use low-risk, Category 4 sources containing Americium-241 or Cesium-137 sources.

The last image in the slide is a portable handheld analyzer used to identify minerals and metals within fabrication facilities or recycling facilities.

These are classified as Category 5 source, typically Americium-241 and are low-risk sources as well.

In addition to the industrial applications and locations, the CNSC identified one nuclear medicine diagnostic clinic located in the Fort McMurray downtown core area. The clinic uses Technetium-99m generators to produce radiopharmaceuticals for diagnostic procedures. These sources are considered low risk.

During the response to the fires, several news stories raised concerns with respect to the Beacon Hill Landfill located to the south of Fort McMurray.

This facility is not a CNSC licensed site. However, it contains some very low-level radioactive waste, which is below the unconditional clearance level of 1 Bq/g as per the Nuclear Substances and Radiation Devices Regulations. The waste site contains low-grade uranium ore mixed with soil in an engineered cell. It is capped with a soil cover and a thick layer of top soil. The site is surrounded by a fence, as can be seen in the picture on this slide.

The Canadian Nuclear Laboratories oversees the safe management of the site under regulatory oversight provided by the province. The material has been managed at this location since 2003.

On May 5th, in accordance with its Nuclear

Emergency Response Plan and in order to ensure a coordinated response and communications, the CNSC entered a state of enhance monitoring of the situation. The CNSC Duty Officer was designated as the single point of contact for first responders and emergency management organizations and staff across a variety of supporting divisions were mobilized to support the response.

Initial focus was on validating the status of licensees' inventories and locations for the purposes of informing the Emergency Operations Centre and its first responders. Of the 92 storage locations identified in the region, on-going discussions and contact with licensees confirmed that 23 locations containing nuclear substances were located in the evacuated area. These locations contained 37 radiography cameras, 89 portable gauges and two technetium generators along with some low-risk sources.

The next two slides in our presentation are to give the Commission a geographical representation of the locations of nuclear substances and radiation devices in the area of Fort McMurray and Fort Mackay. The oil refineries can be seen situated to the north near Fort MacKay and to the south of Fort McMurray. The number of fixed gauges at the facilities has been determined to be in the range of 1,800 devices.

While some non-essential staff were

eventually evacuated as a precautionary measure, the oil refineries were not affected by the forest fires that went through the Fort McMurray area.

In this slide here you can see the storage locations in the Fort McMurray area at the time of the evacuations. These are the locations that were validated through on-going communication with the licensees and CNSC staff.

On May 11, 2016, the CNSC Duty Officer received a request from the Alberta provincial Emergency Operations Centre in Fort McMurray with the purpose of assuring the public that it is safe, from a radiological perspective, to return to homes and businesses in the Fort McMurray area.

In response to that request, the CNSC deployed two experts -- an inspector from the Operation Inspection Division's Western Regional Office and a Program Officer from the Emergency Management Programs Division -- to Fort McMurray.

The occupational health and safety of the CNSC staff was paramount. A hazard profile was prepared with support from the CNSC's Human Resources Directorate and the Directorate of Environmental and Radiation Protection and Assessment.

CNSC staff were equipped with all necessary survey and emergency equipment, available from

the Calgary office.

I would now like to turn the presentation over to Mr. Wallace to describe the activities that were performed in Fort McMurray.

MR. WALLACE: Thank you. For the record, my name is David Wallace and I am a CBRN Program Officer with the Emergency Management Program's Division.

After collecting the necessary personal protective equipment and survey and emergency equipment, Charles Croy and I arrived in Fort McMurray on May 12, 2016. Upon our arrival we met with staff from the provincial Emergency Operations Centre to discuss the known occupational hazards and to develop an action plan to verify the status of all permanent and temporary storage locations previously identified by staff.

We physically visited each of the 23 known storage locations. At each location we took radiation measurements and inspected the exterior of each site to confirm each one was intact and secure. Any licensee vehicles encountered as we drove through town were also verified as to containing no devices. Charles and I confirmed that all locations remained safe as a result of the forest fires.

In addition, the PEOC requested that we inspect the CNL long-term waste management facility located

at the Beacon Hill sanitary landfill site in Fort McMurray.

Further, at the request of the Alberta provincial EOC, we conducted radiological surveys within residential areas that were severely impacted by the forest fires. Charles and I confirmed that the levels of radiation in these areas were not above background levels.

We left Fort McMurray on May 13th, 2016.

As previously mentioned, Charles and I verified all known storage locations for radiation devices within Fort McMurray. This included both permanent and temporary storage locations, such as the truck shown in this picture which was used as a temporary storage location for a portable gauge. We determined that none of the storage locations were impacted by the fires.

As we drove through Fort McMurray, we stopped to verify that any licensee vehicles encountered did not contain any devices. This was done by taking radiation readings at the exterior of the vehicles.

The Provincial EOC also requested that we conduct radiological surveys within areas that were severely impacted by the forest fires to ensure that the areas were safe from a radiological perspective. This is depicted by the photo on the left. We confirmed that radiation levels in these areas were not above background levels.

Furthermore, we verified the status of the CNL long-term waste management facility located in the south end of Fort McMurray. We were able to confirm the fence around the site was intact and that the radiation readings nearby were not above background levels.

Charles and I left Fort McMurray on May 13, 2016. The CNSC ended the state of enhanced monitoring on May 16, 2016.

I will now turn the presentation back to Mr. Rabski.

MR. RABSKI: Thank you.

Communication was an integral part of the CNSC response to the fires. Daily meetings were held between the Directorate of Nuclear Substances Regulation, the Emergency Management Programs Division and the Strategic, Regulatory and e-Communications Division to share new information on the status of the forest fires and to make decisions on CNSC's response.

With their role as the single point of contact, the Emergency Management Programs Division proactively notified the Alberta provincial Emergency Operation Centre, the federal government Emergency Operations Centre and other external stakeholders, including the U.S. NRC of the CNSC's decision to enter an enhanced monitoring state. They remained in regular

contact with these agencies and responded to requests as required.

The CNSC's Strategic Communications Directorate led a communications strategy to provide first responders and the general public with information on the CNSC's response to the Fort McMurray forest fires. On May 5th , the CNSC created a web page dedicated to the Fort McMurray forest fires. The web page contained information for first responders, descriptions of the types of devices that could be found, and up-to-date information on the CNSC's response to the situation. The webpage received over 2,200 page views.

Similar information was posted to CNSC's social media feeds. There were six tweets and 1 Facebook post relating to the forest fires. CNSC media relations responded to questions regarding the security of radiation devices and the potential threat they posed to the public and first responders. The media were also interested in the CNSC's decision to send staff to Fort McMurray as a precautionary measure.

At the same time, the CNSC general inquires telephone line received calls from members of the public; mostly questions pertaining to the risks posed by the fires.

Currently, citizens have been allowed to

return to their communities to begin the long process of cleaning up and recovering from the forest fires. CNSC staff have initiated contact with all licensees to determine their plans to re-establish operations and support of the oil refinery industry. The refineries have also been contacted so that the CNSC staff can re-schedule compliance activities in the coming months and re-establish contact with responsible authorities on site.

To date there have been no issues reported with respect to the inventories that were stored in the community during the fires.

The forest fire situation in Fort McMurray, and the CNSC's response provided an opportunity to reflect on what went well and lessons learned.

The CNSC regulations require that all licensees must be prepared to respond to emergencies regarding the nuclear substances and radioactive devices in their possession. Based on observations by CNSC staff, the licensees in Fort McMurray did just that. It was observed that licensees initiated emergency response measures prior to the official evacuation to provide for the safe and secure storage of their radiation devices. Sometimes this involved cooperation with other licensees to borrow temporary secured storage space and in other cases it was the relocation of radioactive devices to other safer

locations.

By initiating the response level at the CNSC early, roles and responsibilities were clearly identified which streamlined information flow and assigning actions that needed to be taken. The Duty Officer as a single point of contact was effective in dealing with outside communications to the CNSC.

As far as the actions of the CNSC were concerned, one particular positive note was the CNSC's ability to mobilize staff quickly for an on-site response, and with all the necessary survey and emergency equipment that they required. This came out of the Calgary regional office with support from Ottawa headquarters.

Furthermore, CNSC staff were able to gather information on licensee inventory and locations from several licensing and compliance databases. Looking back at the response, this task could have been facilitated with more robust systems for data consolidation and a stronger data query functionality. An on-demand capacity to quickly map licensee locations in particular geographical areas would have been useful in this situation. CNSC staff are now looking into developing this capability.

In conclusion, CNSC staff has verified that all known locations used for the temporary or permanent storage of radiation devices were safe and secure

following the fires.

CNSC staff has verified that radiation levels were not above background levels and that Fort McMurray is safe, from a radiological perspective, for first responders and returning citizens.

This concludes our presentation this afternoon. Staff are available for any questions you may have.

THE PRESIDENT: Thank you.

So let's start with Mr. Tolgyesi.

MEMBER TOLGYESI: Merci, monsieur le Président.

One is -- the first is probably a typing error or something I don't understand. On the page 4, there are radioactive devices used in Fort McMurray area, and the Figure 1 is industrial radiographic camera, 23 devices. And the page 6 on the first line, you are talking about 37 radiographic cameras.

Which one is the right number?

MR. MOSES: Colin Moses.

That's a fair question. I believe the correct number is 37 industrial radiographic cameras, but we can confirm that and get back to you.

MEMBER TOLGYESI: Okay. You are saying on the same paragraph, the 6, that low-risk sealed sources

were left in appropriate upper stage locations.

What is appropriate storage location? Is it fireproof; to what extent? Is it secure against theft? Is it licensed or with a permit? What's that?

MR. MOSES: Colin Moses, for the record.

So as we reported earlier, one of the recent requirements that we inputted for all portable devices is compliance with CNSC REGDOC-2.12.3, which sets out the security requirements for nuclear substances and radiation devices. And so within those requirements, there's specific requirements on the appropriate storage of those devices, so it's really in reference to those requirements that we're referring in there.

And those requirements include two --multiple barriers to prevent access, so they're designed from a security perspective, but also serve a safety perspective in this instance.

MR. TOLGYESI: Because when you're looking at page 7, Figure 5, there's a staff verified the truck used as temporary storage location for portable gauges. How far is secured?

MR. MOSES: Maybe I'll ask Mr. Charles Croy in Alberta to speak to that and what he observed at the site.

MR. CROY: Charles Croy, for the record.

With that particular vehicle, we were able to confirm that the truck itself was locked, providing one barrier, and although it's difficult to see in the photo, there was a fair-sized gauge chain securing the package itself to the steering column of the vehicle, constituting a second barrier. And the transport package itself was, as well, locked.

MEMBER TOLGYESI: Okay. So it responds to the regulation, which is saying how safe that should be.

THE PRESIDENT: So does that mean that none of the devices actually got into the fire?

MR. MOSES: Colin Moses, for the record.

Yes, that's correct. There were no devices that were affected by the fire.

THE PRESIDENT: What is that; that's luck? I mean, it would have been nice to see if some of them can withstand the fire.

MR. MOSES: So certainly there's an element of luck, and the efforts of the first responders who were fighting that fire who really did contain the fire and stop it from affecting those areas.

There have been few historical events of devices that are exposed to fires. Occasionally in some industrial facilities, there may be fires in the general vicinity of gauges that haven't affected them.

I believe there was one instance where an industrial radiography camera was directly exposed to fire. In that case, the device was observed to have some minor discolouration of the paint on the cover of the device.

And historically, approximately 30 years ago, there was an instance where one trailer containing two portable gauges were exposed to fire. In that case, the AECB at the time responded and surveyed and collected those for permanent disposal, but those were severely damaged through the fire.

THE PRESIDENT: Monsieur Tolgyesi.

MEMBER TOLGYESI: So that was my next question, that because the fire in Fort McMurray, it's not like a fire somewhere, you know, you have a location where the firefighters are coming and they could fight and the impact is much smaller, the temperature is much smaller, much lower.

So what is the worst-case scenario if you had all these radiography cameras because they are a high risk -- higher risk? I don't say high, but higher risk. If all those cameras were together and they were caught in middle of a forest fire, what's the impact? What could happen that the box or container burns?

What's happened with the device? Is there a radioactivity which is diffused, or what?

MR. MOSES: Colin Moses, for the record.

First, just to speak to the temperature of the fire, it's really controlled by what is being combusted, so whether -- certainly the breadth and the scale of the fire was significant, but it didn't necessarily mean that there was higher temperatures than a smaller, more localized fire.

But with that said, these specific devices are designed with those requirements in mind, and maybe I'll turn it to Mr. Sylvain Faille to give some specifics on how we review those.

MR. FAILLE: Sylvain Faille, for the record.

In respect to the radiography devices, those are also certified as transport packages, namely, the Type B packages, which are designed to survive accidents, including thermal test. So in a situation like the forest fire, those would survive high temperature fires. But if there was something above and beyond like the temperature of melting of stainless steel, for example, that would be probably contained and there would still be some shielding left and the device would still be contained and the dose rate would be higher than normal, but it wouldn't be extremely high, although the sources are quite significant, as mentioned earlier. It was Category 2 sealed source.

But at the same time, the design of those devices is quite robust. There's been no indication in the past for any accidents anywhere. That's something that rarely happened to one of those types of packages.

THE PRESIDENT: Thank you.

Dr. McEwan.

MEMBER MCEWAN: Thank you.

So I could just follow the same theme of questioning with the technetium generators because where would a safe storage space for them be? And I could see them actually being quite damaged if they were caught in a fire. And there was some fear for a while that the hospital would be caught up in this.

So how do we deal with those?

MR. MOSES: Colin Moses, for the record.

I'll let Mr. Sylvain Faille provide some details, but just to add that in the case of the hospital, those devices were in there, they were stored in a secure location.

I believe they're in the basement of the facility when we confirmed with the licensee, so that would be generally a fairly secure place. I mean, we are definitely dealing with a very significant fire, so there could be potential impacts.

The isotopes that we're looking at there

are also fairly short-lived isotopes, so they had been in storage for a number of days before the fire was starting to encroach on the hospital, so that wasn't really one of our primary areas of concern, but we were keeping an eye on that.

MR. FAILLE: Sylvain Faille.

Just to complement, those packages are not the same type as the one I just described earlier, which are Type B packages. Those are Type A packages that are not designed to withstand accidents and thermal tests, but at the same time, the amount is very limited in those packages and therefore, in case of an accident or a fire like this, the results of the fire would be less significant and the impact as well because of the quantity that's limited in those packages.

And in this case, also, with the short half-life, the impact would be very limited.

MEMBER MCEWAN: So it would be constrained to the local area for a short period of time.

Iodine-131 isn't used up there?

MR. MOSES: Colin Moses, for the record.

In the Fort McMurray hospital, there's only a nuclear medicine clinic, and the only inventory they had at the time was technetium generators.

THE PRESIDENT: Thank you.

Monsieur Harvey.

MEMBER HARVEY: On May 12, you mentioned you left May 13, so when you brief the PEOC people on findings, you knew at that time that there was no concern and could not be any concern in the future for the area even if the fire would come back.

MR. MOSES: Colin Moses, for the record.

At the time they made the request, the fire was coming under control. Certainly the risk in the city was more limited, and so they were really turning their thoughts to the recovery efforts, which is why they asked CNSC staff to come back.

MEMBER HARVEY: But hearing what you said that those sources are very solid and cannot be perturbed by the fire, so at that time, you knew that even in the condition that the fire will surround some parts of those equipment, you will not have any problems -- any preoccupation for the public and the staff there.

MR. MOSES: Colin Moses, for the record.

That's correct. It was really seen as a precautionary measure and a measure of comfort for the community that they asked the CNSC staff to respond.

By the time we had the request, we had general confidence in the security of the facilities.

With that said, we wanted to make sure we

were prepared to deal with any eventualities, so maybe I can let Mr. Wallace speak to some of the preparations that they used to ensure they had equipment to face whatever situation they might.

MR. HARVEY: But has there been any press release at that time that there was no concern?

MR. MOSES: So until we actually physically verified all those locations, we did not -- we certainly indicated that it was not a particular risk or a particular concern, but until we'd actually verified that all locations were intact, as you can imagine, at the time, the amount of information that was coming out in terms of the specific areas that were affected, the fire, was very sensitive information given that a number of people's homes were affected by the fire, so we didn't necessarily have confirmation until our staff were on site as to the exact conditions of all the different locations.

THE PRESIDENT: Ms Velshi.

MEMBER VELSHI: Thank you.

This is good-news story in many ways for CNSC staff, not only a quick responsiveness, but follow through and then reflecting on what could be done better, so kudos to all of you.

Just to get a sense of risk perception around radiation, did the provincial emergency operations

centre reach out for other possible hazardous materials and what condition they may be? I don't know, PCB storage areas or whatever else may be.

MR. MOSES: Colin Moses, for the record.

Maybe I'll ask Mr. Luc Sigouin, who managed communications with external parties, to speak to that.

MR. SIGOUIN: Thank you, Colin.

Luc Sigouin, for the record, Director of Emergency Management Programs Division.

So as was mentioned during the presentation, one of the things that we did early on was advise our response partners, among others, the government -- federal government operation centre, and they're collecting information from all agencies that are involved in supporting in one way or another.

And I can confirm that from a traditional risks, chemical hazards and others, they were in contact with the Environment Ministries provincially and federally, and they had assets that were prepared to support first responders for those types of hazardous material incidents as well.

MEMBER VELSHI: Thank you.

And as far as lessons learned, I know you -- in here, you talk about databases could be more

robust.

How easy was it contact all the licensees in an emergency to get a sense of the state of the sources?

MR. MOSES: I'll let Ms. Sandra Mortimer speak to that.

MS MORTIMER: So getting the information, the contact information, the locations, was relatively straightforward. That's kept in our licensing compliance database.

There was a challenge in reaching a person because the people we were trying to reach, many of them were evacuated and not actually at their offices. So we were able to contact them, leave them a message, ask them to call us back and then, if we didn't hear back, we'd call them a second time or confirm alternate phone numbers and things like that.

So for determining contact information each licensee, that was straightforward. It was a little more challenging to pull together the exact inventories until we spoke to the licensees.

For high risk sources, we have inventory that's tracked very regularly for Category 1 and 2, so we have very current information for those licensees and their sources.

For lower risk sources, the CNSC has --

the licensees report their inventories to the CNSC once a year, so it's a little more -- there could be lag time.

We know that the licensees themselves have requirements to track everything up to date, but they're only required to report to us once a year, so that's where we had to go in and confirm how many gauges were on site at that time, how many might have been in transit or storage elsewhere.

THE PRESIDENT: So are you planning -- you mentioned that you're planning to do something about that. Are you really going to keep track of every -- you're going to put a GPS on every little sealed source material?

MR. MOSES: Colin Moses, for the record.

No, that's not our intent. Certainly we are looking at the security requirements of the more high risk sources like the cameras. And as Ms. Mortimer mentioned, we have real time tracking systems for those that we maintain.

Really, what we're looking at here is a more efficient way to leverage the information that we're collecting and storing, so improving the search capabilities in our databases, consolidating in some areas databases where we're including information on high risk sources and other databases that we have on the lower risk sources.

So it's really looking at system improvements.

In this case, you know, we really were successful in very quickly reviewing the information that we have in our database and collecting that. And this is really setting us up so that if we needed a very prompt or quick response or very immediate questions, we have the systems that can support that.

THE PRESIDENT: Is there a requirement in case of emergency for at least Level 1 and 2, not to wait for you to call, but for them to call and report and say I've lost -- not control. I cannot reach my device, et cetera.

Is there a responsibility articulated somewhere in an emergency situation?

MR. MOSES: Colin Moses, for the record.

In that case, that requirement applies across the board. There's no higher risk and lower risk for that. There is a requirement for them to report immediately if they lose control of any of their sources

THE PRESIDENT: Monsieur Tolgyesi.

MEMBER TOLGYESI: It's a little bit following this question that what I'm asking if -- because you were locating contractors or licensees who are in the area.

Now, could it happen that licensee from Saskatoon or from elsewhere has a contract and working in Fort McMurray area, then you don't expect -- don't expect that he's there? So how do you manage that because, you know, the manpower of contractors are moving, so -- and they have a contract.

So how you could control that? Is use of nuclear device limited to a licence to an area or it's -- it could be moved without advising CNSC?

MR. RABSKI: Henry Rabski, for the record.

That's a good question. As pointed out in our presentation, we're talking about portable devices, so -- and they belong to multi-national companies usually in the civil engineering field and so on, so there is a lot of movement.

Our initial reaction was to, first of all, verify what we know definitely was in the area, but we identified that as a possibility, so those are temporary locations or, say, workers -- companies that could have work in that area for a specific contract.

So our second -- as soon as we initiated that part of the first verification of permanent licensees established in the area, we went through our database and we contacted all licensees that work in western Canada. And in those particular areas where we knew use types like

portable gauges, like radiography companies, we sent that message out and we asked if anyone had been temporarily working in that area and what they were up to.

So we also verified with the refinery sites if there were any non-traditional or non-expected contractors in the area.

That search didn't turn up anyone that was working in that area, so we did an email verification and we made some phone calls to verify that as well.

MEMBER TOLGYESI: But do you request -- there is a provision that you request if contractor is going somewhere, you know, from New Brunswick, is he going to have a contract in Alberta that he advise you that I'm moving there with so many devices, with, I don't know, maybe Class 1 and 2 risk or how we could call it, that they advise you not only that -- because right now, you were looking like dog is running after his tail try to find where is that and probably it should be -- it could be good that if they have to advise you when they do this kind of movement.

MR. RABSKI: For locations more than 90 degrees, there's a regulatory obligation that they would notify the CNSC and inform us of the exact location where that -- where they would be operating. For less than that, there isn't a requirement.

MR. MOSES: But as mentioned earlier, we do have requirements for the real-time tracking of Category 1 and Category 2 sources, and so those are reported on a more regular basis to the CNSC in terms of the locations of those.

MEMBER VELSHI: Quick questions around emergency management. For first responders, is there any training provided around radiation protection?

I know you had information on your web site, but it wasn't for a couple of days after the fires had spread. Was there a need to maybe boost that identified?

MR. WALLACE: David Wallace, for the record.

Within the emergency management programs division, we do have a first responder training program where we actually go out and give radiological response training to hazmat teams as well as other specialties of first responders, and even other government organizations.

In this case, the Fort McMurray hazmat team had not received the training because it's -- we give it on a "on request" basis.

There were some local first responders nearby, say Grande Prairie and Edmonton Fire, that have had the training in the past, and we also took this opportunity

to offer to provide the training while we were there or to come back at another date and provide the training.

MEMBER VELSHI: So perhaps there's a need for greater awareness of this training and its value to some of these other first responders who probably say, oh, well, we don't have a radiation risk here to worry about.

And here -- and I'm sure you're following this, but recently there's been some question that perhaps the evacuation should have been initiated earlier, and maybe there's some learnings for us down the road on that as well.

THE PRESIDENT: Monsieur Harvey?

--- Off microphone / Sans microphone

THE PRESIDENT: First of all, on the institutional control area, if I understand correctly, this is almost -- the level of radiation, measure of radiation, is below release limits.

My question is: Why doesn't it go for public use? When will it go for public use? Why is it still under institutional control?

Who's going to help me on this?

MR. MOSES: Colin Moses for the record.

Maybe I'll ask Ms Karine Glenn to speak to that program.

MS GLENN: Karine Glenn, for the record.

I'm the Director of the Wastes and Decommissioning Division here in the CNSC.

Actually, the CNSC has not imposed any requirements for institutional control for this long-term management facility. All the radioactive material that is located within the mound is below licensable quantities, and therefore doesn't require CNSC oversight. It is controlled. It is a legacy waste, if you'd like, that is being managed by CNL as part of the historic uses and legacy waste that is managed as a liability to Canada, if you would like, but there is no regulatory requirement from the CNSC's perspective. From a safety perspective, the risk is extremely low from that facility, and it's being managed just like any other landfill would be as part of the municipality.

THE PRESIDENT: I know all of this. It doesn't give me the answer as to the why: Why would they spend resources monitoring this if it's below -- if it can be returned back to nature, let me put it this way, and no longer on anybody's list of things to worry about?

MS GLENN: Karine Glenn, for the record.

That would be a question for the Low-Level Radioactive Waste Office of CNL, but it is probably most likely an agreement that was made with the municipality at the time of the cleanup.

THE PRESIDENT: But those agreements go for -- the reason I'm interested, as you know we have a lot of targeted facilities that will go for institutional control, and I always believed that there is another phase after institutional control. So who decided, and when?

Anyhow, it's not a CNSC issue, but maybe CNL will be able to answer. We can ask them about that.

I'd like to hear from our inspector, and maybe Mr. Wallace also.

Mr. Croy, did you have all the tools that you need? Were you provided with devices, masks, whatever you needed to go there?

MR. CROY: Charles Croy, for the record.

We were provided with all the equipment and resources we needed to conduct our activities up in Fort McMurray.

I'd like to take this opportunity to recognize the efforts of staff in the western regional office for collecting a substantial instrument package for deployment up to Fort McMurray. A lot of this work was done while I was returning the EMPD suburban to Calgary to retrieve the equipment.

Further to that, as part of my regular duties as an inspector, I'm provided with standard PD safety boots, hard hat, traffic vests, and Nomex fire

retardant coveralls, should they be needed, and the provincial EOC also provided us with, if they were to be required, respiratory masks.

THE PRESIDENT: So it's their stuff, it's not CNSC's stuff. I'm just trying to learn what kind of lessons we may want to learn about our own staff readiness for an emergency like this. Are we always going to be dependent on the local authorities? Or we have our own gear? And what about the measurement devices, do we have the best that we need to be able to be effective?

MR. CROY: Charles Croy, for the record.

Every instrument we brought up and element of personal protective equipment, with the exception of the masks, which were donated to us by the provincial EOC, was CNSC materials. They came from the lab in Ottawa. We maintain our own stock of radiation instrumentation here in Calgary.

THE PRESIDENT: Mr. Wallace, can you add anything to this? I'm looking for lessons learned.

MR. WALLACE: At the CNSC we actually -- we have all of the -- or we had all of the equipment that we needed for the response.

Back here in Ottawa, while we were out there, there was a job hazard analysis done by the Occupational Health and Safety Advisor, in conjunction with

the Radiation Protection Division and EMPD and OID staff. So they were able to identify any of the hazards, as well as any equipment that we would need for the response.

THE PRESIDENT: Okay, thank you.

I don't know why people are afraid to put names in your documents. I mean you recognize the good work of inspectors in there, in both the decks and in the document. I always ask: Who are those guys and what's their name? There's an aversion of actually recognizing the people who actually do the job. You might want to consider it next time around.

Anything else?

Well, thank you. Thank you for that.

CMD 16-M24/16-M24.B

Oral presentation by CNSC staff

THE PRESIDENT: So the next item on the agenda is the Status of the Designated Officer Program for 2015 as outlined in CMDs 16-M24 and M24.B.

Monsieur Leblanc will make the presentation.

We put you in an unusual position.

M. LEBLANC : Bien oui, c'est un peu étrange.

--- Laughter / Rires

M. LEBLANC : Bien, bonjour, Monsieur le Président et les Membres de la Commission.

Pour le verbatim, mon nom est Marc Leblanc, Secrétaire de la Commission.

Je suis accompagné aujourd'hui de Sophie Gingras, qui est l'agente technique principale de la Commission, ainsi que Monica Hornof, qui est l'agente de soutien technique de la Commission.

We are here today to present CMD 16-M24 on the Status of the Designated Officer Program for the 2015 calendar year. This presentation is for information only and no action is requested of the Commission.

Joining us today are also several designated officers, who are available to answer any questions you may have about their activities.

I will now pass the presentation to Sophie Gingras.

MME GINGRAS : Bonjour, Monsieur le Président et Membres de la Commission. Mon nom est Sophie Gingras.

In this presentation we will provide you with a brief background on the Designated Officer Program, information about the licensing and certification authorities that were carried out by designated officers,

information about non-licensing authorities that were carried out by designated officers, information about designated officer training, and improvements that have been made to the Designated Officer Program.

Designated officers have a requirement to report to the Commission on decisions that are made pursuant to subsection 37(5) of the *Nuclear Safety and Control Act*. This report is intended to consolidate this reporting requirement for the 2015 calendar year. Information about these decisions is provided further in the representation.

I will now pass the presentation to Monica Hornof.

MME HORNOF : Merci, Madame Gingras.

Good afternoon, Mr. President, and members of the Commission.

First, I would like to note a few corrections to CMD 16-M24.

On page 5 of the CMD, the third bullet, the sentence reads:

"1,853 under paragraph 37(2)(d),
licence renewals / amendments /
revocations, with 4,201 authorities
carried...."

The number "4,201" is incorrect and should in fact read

"1,848."

On page 9, section 3.2 of the CMD:

"CNSC staff reports that the
Technical Support Branch carried out
two non-licensing authorities...."

This is incorrect. In fact, six non-licensing authorities were carried out by designated officers in this branch. These additional four authorities carried out by this branch will be reflected in the totals that are reported throughout this presentation.

Finally, on page 12 of the CMD, the first order reported for December 15th, 2014 should be listed as closed on January 16th, 2015, not 2016.

I will now provide a little background information on the role that designated officers have played within the CNSC.

Designated officers have been a key element of the CNSC since the coming into force of the *Nuclear Safety and Control Act* in the year 2000. Under subsection 37(2) and paragraph 65.01(b) of the act, the Commission can authorize a person as a designated officer who can carry out specific authorities on behalf of the Commission. These include, but are not limited to: licensing, certification, and compliance authorities.

To assist designated officers in carrying

out their authorities, the CNSC established a Designated Officer Program. This internal CNSC program includes training information, work instructions, and other tools to ensure that designated officers have the support required to carry out their authorities effectively.

Designated officers carry out more than 95 per cent of CNSC licensing decisions. These decisions generally include lower risk licensing of nuclear substances and radiation devices, import and export licences, and licences for less complex facilities. Decisions that would generate public interest, including the licensing of complex facilities, such as nuclear power plants, remain with the Commission.

We will now provide you with information the Designated Officer Program.

Designated officers have been carrying out their authorities since the year 2000, and these authorities were originally given to 47 CNSC Staff positions.

Positions with designated officer authorities are found in two CNSC branches: the Regulatory Operations Branch and the Technical Support Branch.

In 2014, CNSC Staff conducted a review of the Designated Officer Program and the positions with designate officer authorities that existed at that time.

It was found that out of 47 positions only 31 were required based on the volume of designated officer activities. On this basis, CNSC Staff proposed a reduction of positions with designated officer authorities to better reflect the CNSC's operational needs.

The Commission approved these 31 revised designated officer positions at a May 2014 public commission meeting. A master list of these positions was developed. At that time, the Commission secretary was identified as the process owner. The revised program also included a reporting component to the Commission, as well as new documentation.

Under the *Nuclear Safety and Control Act* only specific not all decisions made by designated officers must be reported to the Commission. These are provided for under subsection 37(5) of the *Nuclear Safety and Control Act*.

An annual reporting component was added to the Designated Officer Program during its revision in 2014. The reporting requirement had two components. The first was to fulfill the designated officer requirement regarding specific decisions that were reportable to the Commission. The second was to provide the Commission with additional information about the Designated Officer Program. This included information about additional authorities carried

out and changes that were made to the program.

This is the first annual reporting activity conducted in this regard. Information provided by designated officers included details about the authorities that they carried out during 2015, the challenges that they faced in carrying out these authorities, information about the training provided to them, and proposed program improvements. As this is the first annual report, it is intended as a baseline for future reporting activities.

The following slides will provide you with information regarding designated officer licensing and certification authorities that were carried out.

The *Nuclear Safety and Control Act* provides for four licensing and certification authorities. These include: the certification and decertification of prescribed equipment; the certification and decertification of persons; the issuance of a licence of a class established by the Commission; and the renewal, suspension, in whole or in part, amendment, revocation, replacement or authorization of a transfer of a licence of a class issued by the Commission.

During 2015 designated officers in the Regulatory Operations Branch and the Technical Support Branch carried out 3,800 licensing and certification authorities. The next several slides will provide more

detailed information on these authorities carried out, broken down by CNSC Branch.

Within the Regulatory Operations Branch designated officers carried out 2,187 licensing and certification authorities. The majority of these were licensing authorities carried out by designated officers in the Directorate of Nuclear Substance Regulation.

Two hundred and twenty-one licences were issued during 2015 by three divisions in the Directorate of Nuclear Substance Regulation. These three divisions also carried out 1,848 licence renewals, amendments or revocations. The Nuclear Substance and Radiation Devices Licensing Division carried out the majority of these authorities. This volume of licensing activities is comparable to that from previous years.

In addition to the authorities carried out by the Directorate of Nuclear Substance Regulation, the Directorate of Nuclear Cycle and Facilities Regulation carried out five licensing authorities.

Three divisions in the Directorate of Nuclear Substance Regulation carried out 113 certification-related authorities in 2015. These included 92 certifications and decertifications of prescribed equipment and 21 certifications and decertifications of persons.

We will now look at the authorities carried out by designated officers in the Technical Support Branch.

During 2015 designated officers in the Technical Support Branch carried out 1,613 licensing and certification authorities. The majority of the authorities carried out were related to export and import licensing by designated officers in the Directorate of Security and Safeguards. This directorate also carried out 103 licensing amendments and renewals.

The Directorate of Safety Management carried out 494 certifications and decertifications of persons, such as certified exposure device operators and reactor operators.

We will now present the non-licensing authorities that were carried.

Non-licensing authorities encompass all authorities that are not related to licensing and certification. These include inspector designations; compliance authorities, such as the issuance of orders and administrative monetary penalties; and return-to-work authorizations of persons whose dose of radiation have or may have exceeded the prescribed radiation dose limits.

During 2015 designated officers in both branches carried out a total of 40 non-licensing

authorities. The majority of non-licensing authorities were carried out by designated officers in the Regulatory Operations Branch.

During 2015 designated officers in the Directorate of Nuclear Substance Regulation, the Directorate of Nuclear Cycle and Facilities Regulation, and the Directorate of Power Reactor Regulation carried out 34 authorities, including nine inspector designations, the issuance of three designated officer orders, the review of 16 inspector orders, and the issuance of six notices of violation.

In the Technical Support Branch, the Director-General of the Directorate of Environmental and Radiation Protection and Assessment carried out four inspector designation authorities. Two return-to-work authorizations were carried out by the same directorate.

We will now present additional information on some of the compliance-related decisions that were made by designated officers.

Designated officers have the authority to issue the same orders as inspectors. Pursuant to subsection 37(6) of the *Nuclear Safety and Control Act*, all orders issued by designated officers shall be referred to the Commission. Since these orders were referred to the Commission after they were issued, the reporting on these

orders is provided for the Commission's information.

Three orders were issued by designated officers to three licensees during 2015.

A designated officer order was issued to a licensee on June 3, 2015 in regard to the release of non-radioactive waste water at a remediation site. The Commission confirmed this order on June 30, 2015. The licensee has since complied with the order.

A designated officer order was issued to a licensee on August 24, 2015 in regard to the failure to comply with a license condition. In this matter the Commission confirmed three conditions of the order and amended three conditions of the order.

A third designated officer order was issued to a licensee on November 30, 2015 in regard to an unauthorized transfer of a radiation device and the order was referred to the Commission on the same date. The licensee has since complied with the order.

These matters are now all closed.

The *Nuclear Safety and Control Act* also provides for the designated officer authority to issue notices of violation and the related administrative monetary penalties. During 2015 six notices of violation were issued by the Director-General of the Directorate of Nuclear Substance Regulation. The violations included

non-compliances with licence conditions, improper transfer of radiation devices, and the unauthorized handling of sources.

All persons served with notice of violation were advised of the opportunity to request a review by the Commission to review the amount of the penalty, the facts of the violation, or both. No requests for a review were made in relation to these matters.

All of the administrative monetary penalties were paid in full and these matters are now closed.

To date, in 2016, four administrative monetary penalties were issued, with one of these matters currently under review.

We will now present information about decisions made by designated officers that are reportable to the Commission pursuant to subsection 37(5) of the act. The reporting of these decisions is the only statutory reporting requirement, and includes decisions on: licence refusals; the issuance of licences with a financial guarantee; the renewal of a licence with a change in conditions or the suspension, amendment revocation or replacement of a licence without the consent of a licensee; and the confirmation, amendment, revocation or replacement of an inspector order.

During 2015 designated officers carried out a total of 3,840 authorities; however, only 1,827 of these were reportable to the Commission under subsection 37(5) of the act.

In January 2015, the Commission, on its own motion, decided to include in all nuclear substance prescribed equipment and Class II nuclear facility licences a condition for financial guarantees. As a result, reportable decisions in 2015 included the issuance of 1,809 licences with a financial guarantee condition.

These decisions were carried out primarily by the Nuclear Substances and Radiation Devices Licensing Division and the Accelerators and Class II Facilities Division, both in the Directorate of Nuclear Substance Regulation.

Designated officers also made 16 decisions regarding inspector orders. These decisions were carried out by designated officers in several directorates. These matters have now been closed.

In the Directorate of Security and Safeguards, a designated officer made two licence refusal decisions during 2015. The applicant in these matters did not submit any subsequent requests for review.

Through the presentation of this information, designated officers aim to fulfill the

reporting requirements to the Commission pursuant to subsection 37(5) of the *Nuclear Safety and Control Act* for 2015.

We will now provide information about designated officer training.

The training program for designated officers includes activities to assist them in carrying out their authorities. These include:

- a briefing with the Commission Secretary and Senior General Counsel;
- self-directed learning of program documentation;
- on-the-job peer consultation and on-the-job designated officer coaching on operational matters.

The briefings with the Secretary and Senior General Counsel are intended for new designated officers. However, a designated officer can request a refresher at any time.

Designated officers provided feedback regarding the training that they had received for the purpose of carrying out their authorities.

In general, designated officers were satisfied with the information that was provided to them as part of their training.

The feedback did note that additional tools such as work instructions and guidance documents would help designated officers in carrying out their authorities.

Designated officers also noted that mechanisms that encouraged the sharing of experiences in a more systematic way would be useful to them.

Based on these suggestions, several improvements are being implemented in the Designated Officer Program.

Recently, a Bulletin Board and a Designated Officer Community Page were set up on the CNSC's intranet to assist designated officers in networking and sharing their experiences with each other.

The Bulletin Board will also help notify designated officers of changes to the program to help them in carrying out their authorities.

Lunch and learn sessions were held in May 2016 and additional sessions are planned.

Additionally, new tools for designated officers, such as improved work instructions for the issuance of orders, have been developed.

Training sessions are going to be held in July and September 2016 for designated officers and their support staff.

I will now pass the presentation back to Sophie Gingras.

MS GINGRAS: In conclusion, during the 2015 calendar year, designated officers carried out a total of 3,840 authorities. Of these authorities, 1,827 decisions were reportable to the Commission.

This reporting of these decisions to the Commission aims to fulfil the designated officer reporting requirement pursuant to subsection 37(5) of the *Nuclear Safety and Control Act*.

During 2015, designated officers also referred three matters to the Commission and issued six administrative monetary penalties. These matters are all now closed.

The information provided today is baseline information for future reporting to the Commission on the status of the Designated Officer Program.

CNSC staff intends to report to the Commission annually on the authorities that designated officers carry out during the calendar year, designated officer decisions that are reportable to the Commission, and changes and improvements that were made to the Designated Officer Program over the course of the year.

Continuous improvement is key to having an effective and successful Designated Officer Program.

Through lessons learned and the consideration of designated officer experiences, these improvements will continue to be brought to the program.

The next Status of the Designated Officer Program report will provide the Commission with information about designated officer activities and program updates from the 2016 calendar year.

I will now pass the presentation to Marc Leblanc.

M. LEBLANC : Merci.

This concludes our presentation.

As this was the initial report, your feedback on what is useful from this report, what can be improved, what you would be looking for would be appreciated.

So we are now available to answer any questions that the Commission may have.

Thank you.

THE PRESIDENT: Thank you.

So let's start with Dr. McEwan.

MEMBER MCEWAN: Thank you, Mr. President.

I think this must have been a very difficult report to write. I think my concern is that the information you give is not totally helpful. For example, if I look at just 37(2), confirm, amend, revoke or replace

any order, or in 37(2)(d), suspend in whole, amend, revoke or replace or authorize, it's all presented as a lump. I think if this is really going to be a valuable tool and help us understand the state of the community, it would be nice to have that broken down.

So if you take the Nuclear Substances Division, 1,465 authorities were carried out under 37(2)(d). How many of those were revocations? How many of those were amendments? How many of those were renewals? I think if we had that level of granularity, it would help trend reporting and it would help understand where we are.

MR. LEBLANC: Yes. I mean this advice is helpful. We just didn't know how much granularity to provide. I will ask Monica, who really put together that information and had to collect it, if she wants to supplement this response.

MS HORNOF: Monica Hornof.

I agree that that type of granularity would be useful for the report. I am not certain on the ability to collect it.

I will ask Mr. Peter Fundarek to please provide information on this matter.

MR. FUNDAREK: Peter Fundarek for the record. I'm Director of Nuclear Substances and Radiation Devices Licensing Division.

We do track that information and we do have it available. A lot of that information is currently reported in the DNSR Annual Report, the Report on Regulatory Operations for nuclear substances. So some of that information can be found there and we can certainly provide that information to the Commission Secretariat on an annual basis.

LE PRÉSIDENT : Monsieur Harvey...?

MEMBER HARVEY: When a decision has to be taken, just to make it simple because there are so many people working on that, there are different people, different preoccupations, what is the process? Do you have an agenda or some delays to get to the decision and is that different from one directorate to another one?

MR. LEBLANC: So I will ask -- as most of those decisions come from the Directorate of Nuclear Substance Regulation, I will ask either Colin Moses or André Régimbald to answer this question in terms of process.

MR. MOSES: Colin Moses for the record.

First, to speak to timelines for the decisions, it depends on the nature of the decision. So certain decisions have very prescribed timelines. For example, in reviews of orders, an opportunity to be heard and stuff like that, decisions need to be made in a time

that is prescribed right in the Regulations. But for most cases, licensing decisions don't have prescribed timelines but we do commit to service standards in the rendering of those decisions and we report on our performance against those service standards on our website.

So maybe Mr. Fundarek can give an example of sort of the specific timelines for, for example, an amendment request in the Nuclear Substances and Radiation Devices area.

MR. FUNDAREK: Peter Fundarek for the record.

When we receive a licence application, we have 20 days to review the document, ensure that it is complete and advise the licensee -- or, sorry, excuse me, the applicant whether or not it is complete and if it's not complete what additional information is required, and we meet that standard well over 95 percent of the time.

And then there is a further business standard for issuing a new licence application of 80 days following the application is received, and we meet that business standard in more than 95 percent of the time as well.

So we do have those kinds of standards, the business standards that Mr. Moses referred to.

We also do fast-track where there is a

critical need for something, particularly in hospitals where they have identified an amendment request that is required for patient care. Those are fast-tracked and we can take those amendments and have them completed within 24 hours of an amendment request. But amendments normally take about two weeks to process.

MEMBER HARVEY: So I suppose that for each decision many people are involved and there is some discussion before you come to the decision. Is that the case or is the decision the sole decision of the officer?

MR. FUNDAREK: Peter Fundarek for the record.

You are correct that there are several people involved in the decision. Primarily, the licensing specialist receives the request from the applicant for whichever licensing action is being contemplated. They would conduct a review of the information and make a recommendation for a licensing action.

That gets forwarded on to a project officer who reviews that information and ensures completeness and does a quality control/quality assurance evaluation of the information to make sure that the licensing action that is being proposed is in accordance with the request by the licensee.

And then it comes to me for final decision

and I will conduct a review of the information and the recommendation by the licensing specialist and then issue a decision.

MEMBER HARVEY: Over that big number of decisions taken, how many complaints have you received and what is the nature of those complaints?

MR. FUNDAREK: Peter Fundarek for the record.

We have received no complaints with respect to the time taken or the decisions that have been made. Any decisions that I make can be reviewed by the Commission and to date we have received no requests for review by the Commission of a decision.

MEMBER HARVEY: Good.

THE PRESIDENT: Thank you.

Ms Velshi...?

MEMBER VELSHI: Thank you.

I think I have been kind of struggling in the same way as my fellow Commission Members, there are a lot of numbers but what do they really mean? And I know this is the first report and perhaps down the road we will get trending, but as you were asking for feedback, even to say, you know, this is normal, these number of authorities or orders or whatever, I think that would bring some context in there.

I have a couple of questions. One is how do you measure the effectiveness of this program? What specific measures do you have?

Mr. Fundarek, you talked a little bit about, you know, that orders have been closed, there have been no challenges. I think that's a great measure to say, hey, you know, all the AMPs that were issued, none of them were challenged, they are closed, and if you were to track that as a measure or how many orders got revised or revoked or so, but I think quantitative measures would also be helpful as opposed to these were the numbers that were issued, because that doesn't really tell you anything. So that is for your consideration.

What I wasn't sure, so I understand the three designated officer orders all coming to the Commission for review, but it was the inspector orders. So what happens to those? And I can't remember where in here, but there were 16 decisions on inspector orders. So does that mean inspectors issued an order and those got challenged and some got revised and amended? I was missing that piece.

MR. LEBLANC: I will address this. Marc Leblanc pour le verbatim.

First, yes, there are large numbers that are being reported this year. It's mostly because of

financial guarantee consideration.

In terms of the two types of orders, some are issued by the inspectors, others are issued by the DO himself or herself. There were only three of the latter and these were a lot more publicized in this. They automatically need to be reviewed by the Commission. They were reviewed by a panel of the Commission made up of the President and then the result of that review is published on our website. This will result in a record of decision and will be pushed to our approximately 2,500 subscribers.

With respect to the other orders, a similar pattern occurs but it is from the inspector to the designated officer level, where the decision will need to be confirmed or amended by the DO and will again be published and sent to the subscribers.

So in that context, I will ask Mr. Moses or Mr. Régimbald to supplement the response.

MR. MOSES: Colin Moses for the record.

So I can speak from very real experience because I just had an order referred to me today for review. But the process that it goes through is that an inspector, when they come across an immediate health and safety concern, they issue the order directly there. They have prescribed timelines to refer that order to a DO for review.

So similarly, when DO orders are issued, they are referred to our higher authority, being the Commission. The same principle applies for inspectors, so they are required to refer those orders to the DO for review.

The DO will then issue an opportunity to be heard to the person who received the order. That doesn't mean that they can leverage that to not comply with the order in the meantime, the order still stands, it is still a legal requirement for them to comply, but that does give them an opportunity to provide any comments or feedback or requests for changes if there are elements of the order that are challenging for them to comply with.

So should they request that, the DO would conduct a hearing of sorts with the affected parties, similarly to the hearings conducted by the Commission, and render a decision. And their options for decision are confirm, amend, revoke -- and I think I hit all the verbs there -- and replace, that's correct. So there is an option to replace the order entirely. And so they will render their decision. That decision is shared with the affected party regardless of whether or not they requested an opportunity to review that order.

MR. LEBLANC: If I may just complement the answer.

It was alluded to before that there is the regulatory oversight report on an annual basis that provides some of the information, the push outs with respect to the review, not the review orders, but the fact they have to be either confirmed by the Commission or a DO. This again is a way that -- the purpose of this report is to consolidate.

I agree entirely with you in terms of the trending, I think this will be key in future reports. We did mention in the context of the presentation that the numbers were very similar to other years, but starting next year we will be able to compare one year against the other and see if there are any trends and that information will be readily available by then.

MEMBER VELSHI: Thank you. So that description of the process was very helpful.

So is it fair to say that if an inspector order after being reviewed by a designated officer goes through some change, whatever all those verbs were, that that is maybe a reflection on how good an inspector order was in the first place?

MR. LEBLANC: I will ask Mr. Moses or Mr. Régimbald to answer this question.

MR. MOSES: Colin Moses for the record.
No. I think the order is based on the

information that the inspector had on hand at the time and reflects their views on the health and safety risks associated with those activities. So a review of an order by a DO and a change of an order is based on the cumulative information that has been provided.

MR. RÉGIMBALD: André Régimbald here.

And also if there is a hearing conducted, so the licensee or the person named on the order, depending on the discussion, there could be some modification to the order in order to facilitate compliance with it. So that's how the order would be amended. Or if it's entirely inappropriate or whatever, it could be replaced by another order. So the DO has discretion in acting that way.

LE PRÉSIDENT : Monsieur Tolgyesi...?

MEMBRE TOLGYESI : Merci, Monsieur le Président.

I understand that most of these 3,800 and some odd interventions are licensing or relicensing and that kind of stuff, and I think what will be of interest for me and for the Commission is that what part is a non-compliance? Where should you intervene because something should be changed, something should be corrected, it's going wrong? That for me is of interest. So I don't know to what extent you could do that or how you could do that.

MR. LEBLANC: Marc Leblanc.

One of the things we tried to do was to separate in the presentation, in the report between licensing and non-licensing activities which are really your compliance and your other elements. So in that context, we tried to separate the two because the one really that is more likely to be referred to the Commission or you need to be informed on are what, are the refusals of a licence, which are very few and far between, but then the non-licensing elements which are the orders and the AMPs, which are the ones that have been communicated to you in the past and the focus in terms of reporting is on those elements.

MEMBER TOLGYESI: When you name somebody as a designated officer, what are the prerequisites or conditions to become a DO? Is it just by position or function or responsibilities and training or are there some other considerations?

MR. LEBLANC: I will ask Monica Hornof to answer this question.

MS HORNOF: Monica Hornof.

To become a designated officer, they are typically higher level positions such as directors or director generals and as such there is an expectation that the designated officer has the experience and knowledge

required to carry out the authorities. In the interview process for these positions, it is known that it is a designated officer position, so it is taken into consideration when the incumbent is being put into that position.

I would like to note as well that the 31 designated officer positions were approved by the Commission in May 2014 and as such the Commission approved that positions at those levels would be qualified as designated officers.

MEMBER TOLGYESI: And I will ask, talking about the training program, is there somewhere a kind of consultation on expectations or needs of licensees? Do they have something to say about what they expect these DOs do or -- I don't say how they will behave, but how they will react or communicate?

MR. LEBLANC: Marc Leblanc.

I just want to make sure I understand your question. Are you asking whether we are getting feedback from the licensee community on the performance of our DOs?

MEMBER TOLGYESI: Yes.

MR. LEBLANC: Yes. I will ask Monsieur Régimbald to respond to this question, but I would think not.

Monsieur Régimbald, please.

MR. RÉGIMBALD: André Régimbald here.

We have service standards, as Mr. Fundarek has explained earlier, for delivering licensees, for issuing licences for example. There are timeframes prescribed in the Regulations and in the Act for example to issue or to deliver a decision on certification or decertification or orders and things like that.

The feedback we are getting. We conduct regular outreach with licensees and they have the opportunity to advise us and to give us feedback on our service standards and they can always pick up the phone and phone us at any time to discuss, you know, their particular situation. Also, if they are not satisfied about the DO decision, they can always appeal to the Commission for a review of the decision.

THE PRESIDENT: Anybody?

Okay. I promised Marc I will be honest. I didn't find -- I'm with colleagues here, I didn't find this report useful. In fact, I told him I was surprised to see this report in front of us. I consider it to be a management administration issue.

Some of the requirement to come back to the Commission was our own setup and I didn't think that we need to talk about all the financial requirements to come here and tell us about how many was done. If somebody was

non-compliant, it would come to us anyhow.

And most of the substance that we are talking about are during the various annual report of substance, and when DNSR reports on substance, we can ask them how many licenses you have done, how many were rejected and then you can talk about specifics.

What I consider this to be is a program where every few years -- we have yet to determine how many years -- do we have enough DOs, too many. I noticed in the table here there are a lot of designated DOs that did nothing this year. Now, I don't know if this is good or bad. I mean there is zero activity against their name. So do we need all of them?

The one thing which I found very interesting again is that all the DOs don't meet together annually to share experiences and learn from each other. I find that not a good management practice, let me put it this way, when you can share from all the various branches some experiences and compare notes.

And on training, absolutely to your point, they better be trained very well about how to do it. We are getting more and more into legal issues with some of the processes, particularly in AMPs, and so we have to be aware as to how that goes.

So there are a lot of issues here which I

don't think we need to visit on an annual basis in this format unless there is a legal requirement and I'm not sure that we cannot finesse those things.

MR. LEBLANC: So on the suggestion that they be an annual, the only thing I think that is something you had passed along to me and that we are going to look into. So I believe this is something we should do.

But with respect to training, just for example, next month, in July, there are two mandatory one-day sessions for all DOs on -- well, not all DOs, but all DOs that have the authority to issue orders. So there will be very specific training and there is some more generic training. All of the DOs will have followed the training that is given by legal services on the Act and Regulations.

I think -- and André Régimbald may complement the response a bit later -- the training next month will also look at what are the authorities under the Act, the rules of procedure, ensuring they fully understand what are those requirements.

And new DOs also meet with me and Lisa Thiele separately so that we can ask them if they fully understand what it is they are doing and if they understand the rules of procedure, what it is that they have to do in terms of their role. So the training component is being

bona fide as we go and it is mandatory training.

THE PRESIDENT: I was looking for the word "mandatory" in section 5 here, 5.1. I didn't -- maybe I missed it but I didn't see the mandatory requirement. There was a lot of --

MR. LEBLANC: Thanks for that, but yes.

THE PRESIDENT: -- self-directed --

MR. LEBLANC: Yes.

THE PRESIDENT: -- go on the website and all this. You know, they are all very good but they are not mandatory.

MR. LEBLANC: So this will be mandatory training. We are keeping track as to who is following the training and not.

The distinction is really with the inspector qualification program. You cannot be an inspector and get your card until you have done all of the training. A DO becomes a DO on the basis of being appointed as a DG of a particular position and then they get trained and they get -- so they are presumed to be qualified as opposed to an inspector. This is how -- that is the way it is at the moment.

But I think the new DOs are very prudent. They are the ones who come to see us, they ask questions, they ask their peers, and I am very confident that by the

time they will issue a decision -- and they will be accompanied by somebody with more experience and they will learn on it. So this is what the program is about. We are dealing with a different type of individual than the person who is your REG 4 just getting to learn about being an inspector.

So if André wants to complete the information.

M. RÉGIMBALD : Oui. Merci, Marc.

And also, I would like to say that we have established program documents and processes, work instructions for designated officers to follow, and I understand for all of the authorities, for example in Mr. Fundarek's shop there is a set of procedures and processes to follow for staff, you know, to submit recommendations to the designated officer, how the designated officer renders a decision and all that. And a new director coming in would be expected to learn these processes before getting, you know, the certificate of designation.

Authority for certification of exposure device operators or control room operators, there is a series of well-established documents and processes in place that DOs have to follow and new persons coming into the position are expected to learn about these processes and

documents before engaging in their duty as designated officers.

MR. LEBLANC: So just in terms of the helpfulness or lack thereof of the report, we were hoping to capture information that is not normally provided on a consolidated basis. I get fully that we can improve on this.

I understand the issue of granularity and there were really things -- we discussed whether we incorporate the DO report into each of the ROR so that it is very specific to that organization rather than having the DO report. There were DO reports on an annual basis some years ago and we just thought that we would revive this given the renewal into the review of the practice that was approved by the Commission a bit more than a year ago.

So we will have to discuss with Colin and Greg and others that provide a lot of information on their DO activities whether there's a better way of doing it and what is information that would be most helpful.

THE PRESIDENT: But again, you know, if you look at Appendix B and some of the designated -- the authorities carried in 2015 raise a lot of questions about why do we need all of them.

And, secondly, really what we should deal with at the Commission level is with issues, concerns that

came in, not with the routine. The financial or licence amendment and renewal is a routine. What would you expect us to do with those numbers? They do not really add any value.

So I think that some of those issues that you raise are good issues, but they are management issues, they are not Commission approval issues.

And I would like to sit down with our management committee and talk about the designated officers. A lot of them have zero action last year. Well, maybe last year was a different issue, but I would like to revisit kind of those things and always compare notes. DNSR is very active, some of the other branches are not, so they can share some experiences from one branch to another.

MR. LEBLANC: So as Sophie could complement because she was there when we worked with the staff to determine the number, because you are referring to the number in the appendix, from 47 to 31. Those were all based on objective data collected for a number of years on the basis of who had activities and who should have the authority.

Experience has shown this year that there should be changes to this possibly, including in some areas where the volume has increased and they may need to have a senior officer also appointed and this would have to come

to the Commission to approve those new designations and where we cease to do so.

I don't know if you want to add anything, Sophie.

MS GINGRAS: Sophie Gingras.

When we did that project, we definitely did thoroughly look at all of the data about the number of DO decisions from a few years before and that was actually really useful in reducing the number of designated officers and also for us to determine that in some divisions there was actually a need not only to have the director having designated officer duties but also a few senior officers that would actually assist that director either when he is away or when there is an unusually high volume of decisions to be taken. So on that side, that was useful.

And, as Mr. Leblanc said, we will definitely look into this again in order to take into account some changes in volume for example that might happen over the years.

THE PRESIDENT: Okay.

Questions?

Monsieur Harvey...?

MEMBRE HARVEY : Oui, une question pour monsieur Leblanc.

You mentioned at the beginning that you

were the owner of the program; is that right? Is that what you said?

MR. LEBLANC: I said I was the process owner.

MEMBER HARVEY: Yes. So I would like to know what is the role or the implication or the responsibilities of Monsieur Leblanc in that program.

MR. LEBLANC: That is probably the most difficult of questions.

--- Laughter / Rires

MR. LEBLANC: I was designated as a process owner on the basis that the Secretariat is responsible for the issuance of DO certificates. Also, you needed to find a place for it. So I am really the process owner, but I am kind of co-responsible with the Executive Vice President, Ramzi Jammal, given that a large proportion of the DO activity falls under his responsibility.

But in that context, as process owner, we are taking a few roles, one of which was to report annually on the findings on a consolidated basis and also to maintain the list of designated officers and to ensure the certificates are attributed to the people who should have it. If somebody leaves the organization, we make sure we recuperate it. We ensure that there is one that we identify as the replacement. So the role is rather less

than what is done at the level.

For example, on training and on procedures, although I will co-sign the process to make sure that it is what was being sought, the training itself will be conducted within the ROB or TSB branches themselves.

MEMBRE HARVEY : Merci.

THE PRESIDENT: Dr. McEwan...?

MEMBER MCEWAN: So again this is really broadening the specifics, but under the certification and decertification of persons, what roles are included under persons?

MR. LEBLANC: So I will ask staff to respond. Will it be you, Mr. Régimbald, or is there --

MR. RÉGIMBALD: Greg Lamarre.

MR. LEBLANC: Greg. Is Greg with us? Yes? So Greg, please.

MR. LAMARRE: For the record, Greg Lamarre, DG of Directorate of Safety Management.

So one of my responsibilities and that of one of the directors within Directorate of Safety Management is exercising of DO responsibilities under 37(2)(b), which is the certification and decertification of operators. So typically we look at CEDOs, Certified Exposure Device Operators. In terms of numbers, that is

the biggest number of certification decisions that we make. But then we also have all of the operators, authorized nuclear operators, control room shift supervisors, shift managers, et cetera, at the other Class 1 facilities, the NPPs, the research reactors, et cetera. So it's those types of operators that we are talking about.

MR. MOSES: Colin Moses for the record.

Just for completeness, we also in our Directorate certify Class II radiation safety officers and those are certified by the Directorate of Nuclear Substance Regulation.

MEMBER MCEWAN: So again, a broader philosophical question. Why only Class 2 radiation safety officers? Why not all radiation safety officers?

MR. MOSES: As you will hear in our Regulatory Oversight Report, we are looking at our oversight of all radiation safety officers. At the time we reviewed the program the decision was taken in the context of a review of the Regulations, that it is appropriate for these radiation safety officers who have very detailed and specific requirements to follow that a certification is the right route to take and so that's why the Class II Regulations were amended to require that certification.

Other areas in our mandate. We also require the certification, as Mr. Lamarre mentioned, of

Certified Exposure Device Operators.

With respect to radiation safety officers in the Nuclear Substances and Radiation Devices, we are looking at the right regulatory approach. Certification might be appropriate. Clearly, the volume that we will be dealing with is a very different volume, and also, the nature and scale of the responsibilities of the RSO is really dependent on the type of activities that are under that. So to apply a broad brush there across all of those activities might not necessarily be the right regulatory approach. So before we leap into a solution, we really want to make sure we have a clear understanding of what the issue is and what the most appropriate way to regulate that is.

THE PRESIDENT: And that's the kind of discussion which is a substantive discussion that when you come in front dealing with the annual report or elsewhere we can raise it as a policy issue that requires further investigation, right.

Anybody else?

So I would recommend that you bring this to our management committee before we decide what is going up to the next Commission meeting about annual report. I think we will have to tweak some of this, I would argue.

M. LEBLANC : Merci.

THE PRESIDENT: Thank you.

--- Pause

THE PRESIDENT: Okay, so this concludes the public meeting of the Commission for today. The meeting will resume tomorrow at 9 a.m. Thank you for your participation and have a nice evening.

And I'm reading Marc's piece here.

MR. LEBLANC: Well, it's for members of the public. I don't think we have any, so it's okay.

--- Laughter / Rires

--- Whereupon the hearing adjourned at 5:52 p.m., to resume on Thursday, June 23, 2016 at 9:00 a.m. /
L'audience est ajournée à 17 h 52, pour reprendre le jeudi 23 juin 2016 à 9 h 00