Canadian Nuclear Safety Commission

Commission canadienne de sûreté nucléaire

Public meeting

Réunion publique

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

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

Commission Members present

Commissaires présents

Dr. Michael Binder
Dr. Moyra McDill
Mr. Dan Tolgyesi
Ms. Rumina Velshi
Mr. André Harvey

M. Michael Binder
Mme Moyra McDill
Mr. Dan Tolgyesi
Mme Rumina Velshi
M. André Harvey

Secretary:

Secrétaire:

Mr. Marc Leblanc

M. Marc Leblanc

General Counsel :

Avocate général:

Ms. Lisa Thiele

Mme Lisa Thiele

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Ottawa, Ontario

--- Upon commencing at 9:00 a.m. /

L’audience débute à 9h00,

Opening Remarks

MR. LEBLANC: Bonjour, mesdames et messieurs. Bienvenue à la continuation de la réunion publique de la Commission canadienne de sûreté nucléaire.

We have simultaneous translation. We would ask you to please keep the pace of speech relatively slow so that the translators have a chance to keep up.

Des appareils de traduction sont disponibles à la réception. La version française est au poste 3 and the English version is on channel 2.

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

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

I’d also like to note that this proceeding is being video webcast live and that archives of these proceedings will be available for a period of three months on our website.

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.

THE CHAIRMAN: Thank you, Marc.

And good morning and welcome to the continuation of the meeting of the Canadian Nuclear Safety Commission.

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

Je vous souhaite la bienvenue. And welcome to all of you who are joining us through webcast and teleconference.

I'd like to begin by introducing the Members of the Commission that are here with us today. On my right are Dr. Moyra McDill and Mr. Dan Tolgyesi; on my left is Ms. Rumina Velshi and monsieur André Harvey.

We've heard from Marc Leblanc, the Secretary of the Commission and we also have with us Lisa Thiele, General Counsel to the Commission.

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

The agenda was approved yesterday. Please refer to the agenda 12-M12.A for the complete list of items to be presented today.

In addition to the written documents reviewed by the Commission for today's meeting, CNSC staff and licensees will have an opportunity to make presentations, and Commission Members will be afforded an opportunity to ask questions on each of these items before us today.

THE CHAIRMAN: Okay. So the first item for today is pertaining to the status report on Rio Algom Limited Elliot Lake Historic Mine and Tailings Management Sites, as outlined in CMD 12-M14.

And before we start I'd like to note that we have, hopefully, via teleconference, Mr. Ron Dorscht from the Ministry of Environment.

Can you hear us, sir?

MR. DORSCHT: Yes, I can.

THE CHAIRMAN: Thank you.

Marc?

5. Update on items from previous Commission proceedings

5.3 Rio Algom Limited: Interim

Status Report on Rio Algom
Limited Elliot Lake Historic Mine
And Tailings Management Sites

MR. LEBLANC: So a Notice of Public Participation was published on February 10, 2012, inviting the public to comment, in writing, on this meeting item. The submission filed by CNSC staff was made available on the same day, February 10th. The Commission received two submissions as listed on the agenda.

Mr. President?

THE CHAIRMAN: Okay, so we also -- I should note -- I should have noticed to start with that we have members from Rio Algom Limited here in attendance who are willing and able to answer any questions.

And let us start with the presentation by staff. And, Mr. Elder, I understand you're going to make the presentation. Please proceed.

12-M14
Oral presentation
by CNSC staff

MR. ELDER: Good morning, Mr. President and Members of the Commission.

I am Peter Elder, Director General of the Directorate of Nuclear Cycle and Facilities Regulation.

Following the Commission Hearings held in December of 2005, the Commission granted Rio Algom's request for indefinite licence to manage its Elliot Lake decommission uranium mine sites.

In its decision the Tribunal requested that CNSC staff report back to the Commission on the status of the sites following issuance of the state of environment report for the Serpent River Basin. These reports were anticipated to be done every five years.

So this is the first of these updates and then going forward, staff would anticipate doing them every five years.

With me at the front table are Mr. Don Howard, Director of the Waste and Decommissioning Division and Mr. Ron Stenson, our Senior Project Officer responsible for the Elliot Lake files.

Mr. Stenson will be providing the rest of the presentation but we also have other staff available to answer questions and as been noted, we have a representative from the Ministry -- Ontario Ministry of Environment available as well.

I would now turn the -- hand the presentation over to Mr. Stenson.

MR. STENSON: Thank you.

Good morning. And for the record, my name is Ron Stenson; I'm the Senior Project Officer for the Waste and Decommissioning Division and the CNSC Lead on the Elliot Lake files.

As stated earlier, this is the first update to the Commission on the state of the environment for the historic Elliot Lake uranium properties owned by Rio Algom Limited.

In 2004, the Commission issued the licence which requires Rio to monitor and maintain their nine mine mill sites and eight tailings management area safely.

The licence brought together three previous licences bringing all of Rio's closed decommissioned properties under a single licence.

In 2005, Rio requested that the licence be issued for an indefinite period of time, arguing that the sites were closed, decommissioned, stable and posed a low risk to humans and the environment.

At the time of licensing, the Town of Elliot Lake had experienced a beaver dam failure downstream of some of the licensed properties. This beaver dam failure had closed a local road and disrupted access to some local park areas.

This heightened public awareness,

translated into public sensitivity, coinciding with the Commission hearings, addressing the consolidation of the three licences.

As a result of this public interest, the Commission requested CNSC staff to report every five years, the scheduled tied to the five-year cycle, reporting for the Serpent River Basin Monitoring Plant on the state of the environment for the nine Rio Algom sites.

This staff report would allow additional opportunity for the public to review the state of the environment as well.

Some background of the mines of interest. Uranium took place in the Elliot Lake area between 1956 and 1998; decommissioning took place between 1992 and 2002.

Rio Algom owns monitors and maintains nine properties with eight tailings management areas. CNSC efforts are primarily focused on the tailings management areas and any downstream impacts that may result from managing the uranium tailings for the long-term.

The mine and mill sites have been decommissioned to the satisfaction of the federal and provincial authorities and are very stable.

Caps and closures are inspected by CNSC staff and the province on a periodic basis, about every

five years. The last inspection was in May 2011 and no compliance issues were found.

This map shows the relative locations of the 12 mines and 10 TMAs in the Elliot Lake area; one of these mines, Pronto, is not within the Serpent River Basin but is included in the state of the environment reporting for completeness. Pronto is located south of the basin, closer to Lake Huron.

CNSC has reviewed the current state of the environment report, the annual operations reports, including radiation protection information, the monthly water quality reports, the annual geotechnical reports, and their own annual and geotechnical inspection reports as part of the summary to the Commission.

Rio Algom and Denison Mines jointly performed the Serpent River Watershed Monitoring Program. It is a very extensive monitoring program, designed to track trends in environment, quality across the basin through time.

The Serpent River Watershed Monitoring Program was designed in consultation with federal and provincial regulators and has been updated twice since its inception in 2000.

The current state of environment report is a comprehensive compilation and assessment of data from

2005 to 2010.

CNSC staff have reviewed the licensees' state of the environment report, and found that overall, based on an assessment of the environmental monitoring data, environmental conditions are improving at the Elliot Lake sites. More specifically, water quality is improving and environmental impacts, such as lower taxonomic richness and abundance in the benthic communities, are now only evident immediately downstream of the Quirke and Stanleigh TMAs.

Lakes further downstream are in good environmental health, with benthic community metrics similar to control lakes, and health indicators of white suckers are similar to reference lakes. Sediment contaminant levels continue to be slightly elevated which is to be expected due to the low depositional rates and bioturbation in these environments.

The state of the environment report is a compilation of results from the tailings management area operational monitoring program, the source area monitoring program, and the Serpent River watershed monitoring program.

Results from the TAMP, the tailings management -- area operating management program, indicate that the TMAs are operating as designed. Historically

impacted downstream environments are recovering well.

Releases to the environment are monitored under the Source Area Monitoring Program, SAMP, and current releases to the environment are extremely low, and there are no measurable impacts from current activities outside of the licensed areas.

The Serpent River basin monitoring plan indicates that Radium 226 is below the provincial water quality objectives at all sites, and despite concentrations of Radium 226 periodically measuring above background but still below provincial water quality objectives, trends in these Radium concentrations are decreasing with time.

Radiation protection monitoring: All reported dose limits for workers, doses to workers on the site, are below the public dose limit of one millisievert per year. Although no direct measurements of dose to members of the public are taken, it is extremely unlikely that any member of the public would receive a measurable dose from casual use of the sites.

Public access to the sites is restricted to areas of no or little residual material, and publicly accessible areas are for daylight use only. CNSC staff has no radiation protection health and safety concerns at these sites.

Rio Algom inspects the physical works associated with managing these sites regularly. An annual geotechnical inspection by Rio Algom is reported to the CNSC as part of their compliance reporting. An independent third-party geotechnical review is commissioned every seven years as recommended by the Canadian Dam Association. There are no compliance concerns resulting from these inspections.

Based on its own inspections, CNSC staff concludes that overall the dams and associated structures are in good general operating condition and appear well-maintained. CNSC staff has no geotechnical concerns at these sites.

For the information of the Commission, typical control features found at the Elliot Lake sites include dams, dykes, berms, and spillways. There are 77 structures inspected by Rio annually, an independent third-party analysis every seven years, and CNSC geotechnical staff every three or four years.

The CNSC compliance monitoring program for the Elliot Lake sites includes desktop reviews of numerous reports submitted by the licensee, annual inspections of water treatment plants and ongoing maintenance of physical features, geotechnical inspections every three or four years, and monitoring local newspapers, and attending

periodic public outreach activities.

CNSC staff has no outstanding compliance concerns for these sites.

Other administrative considerations: CNSC staff has received an updated proposal for the Rio financial guarantee. It is currently under review. There continues to be adequate financial assurances to maintain these sites as required.

The last formal review of the public information program was for licensing in 2005, but the PIP has not changed. In August 2011, staff received a summary of the latest activities under the PIP and have included it as an Addendum G to the CMD. CNSC staff continues to be satisfied with Rio's implementation of their public information program.

So, to conclude, CNSC staff has no environmental compliance concerns; CNSC staff has no health and safety concerns; CNSC staff has no geotechnical concerns; and CNSC staff has no outstanding compliance concerns.

CNSC staff concludes that the Serpent River watershed is recovering form historic impacts of uranium mining and milling. The current state of the environment downstream of the licensed areas is very good, and the environment within licensed areas is generally healthy and

improving.

This concludes staff's presentation. We're available to answer any questions you may have. Thank you.

THE CHAIRMAN: Okay, thank you.

Before getting into the question period, I'd like to ask Rio Algom whether you have any comments. If you want to make any observations, now's the time.

MR. BLACK: Thank you, Mr. President.

I would like to introduce myself; my name is Kenneth Black. I'm Manager of Environment & Community for Base Metals Reclamation and Closed Mines in Tucson, Arizona.

I have in the past lived in Elliot Lake and worked for Rio Algom. I'm an officer of Rio Algom Limited. To my left is Debbie Berthelot. She is the Reclamation Manager at Rio Algom Mining, and has been a long-time resident of Elliot Lake, for, I take it ---

MS. BERTHELOT: Thirty (30) years.

MR. BLACK: --- thirty (30) years.

We have no formal presentation to offer to the Board members. We found the presentation precise and accurate. And we're willing and able to respond to any questions.

THE CHAIRMAN: Thank you.

Just to observe that we have two written submissions that were sent to us, as outlined in CMD 12-M14.1 and 14.2, one by Northwatch and the other one by Serpent River First Nation. So we will open the questions now, to all of them, including Mr. Dost, Ministry of Environment.

So let me start. Monsieur Tolgyesi?

MEMBRE TOLGYESI: Merci monsieur président.

The first question is to the staff. We are talking about interim report? It's an interim report or it's a progress report? "Interim report" means it's a kind of final report which is coming next, but this is a kind of indefinite project for years and years.

MR. ELDER: Sorry -- Peter Elder.

We looked at this in terms of interim, in terms of there is an ongoing monitoring program. Maybe it's a five-year status report, is a better title, but certainly it's the first one we said, "This is partway," you know, "This is the first one" ---

MEMBER TOLGYESI: M'hm.

MR. ELDER: --- yes.

THE CHAIRMAN: It does leave the impression there's a final coming right away, right?

MR. ELDER: Yes.

THE CHAIRMAN: So we, some of us were not

here when all of this was set up, an indefinite licence with -- I think you've got to find a better title for this kind of a report, like a five-year status report, or update, five-year update, would be a little bit more appropriate, I think.

MEMBER TOLGYESI: This is a question to probably Rio Algom: According to the staff report, there's a small staff of Rio who is there; most of the work is done by contracting, subcontracting, et cetera, by consultants.

Could you tell me what's the Rio staff? What's the other contractors' personnel who are at the site? How many they are, what's your performance and health and safety of them also? And what's -- could you foresee that there will be a variation of manpower over the time?

MS. BERTHELOT: Debbie Berthelot, for the record, for Rio Algom.

The staffing levels at the closed mine sites in Elliot Lake have been very stable, with nine full-time equivalents for -- since the year 2000. We expect to carry that staffing level forward into the future.

There is one full-time person with Rio Algom, that would be myself. Our care and maintenance

contractor is now in the 11th year of performing the contract. They have six dedicated staff that are dedicated to that contract, and then the remaining two or three positions would be for trades or seasonal workers that undertake the maintenance on the sites.

And that's how we plan to move forward in terms of the competency of the contractor those requirements for both the base compliment as well as the core competencies of the staff are addressed in the contract for the service provider and are reviewed as part of our contract and performance reviews with that contractor.

And you also asked about the health and safety performance and we have no accidents or incidents or lost time accidents at the sites since we closed in 2000.

MEMBER TOLGYESI: Did I understand there are nine fulltime equivalent that's only Rio Algom or contractors included also?

MS. BERTHELOT: That would include the contractor. There's one person for Rio Algom, so one fulltime equivalent for Rio Algom and height fulltime equivalent for the contractor. We also have functional supports for Rio Algom provided in health, safety environment community and technical support through our

reclamation and closed minds group in the Tucson, Arizona.

MEMBER TOLGYESI: That means that staff of nine you do monitoring, mainly, inspections. But is there some work which is site restorations and this type of work -- dam building because if you are only height besides yourself, I mean, is not too many people to work with highway equipment and what not?

MS. BERTHELOT: All of the actual physical works at the Elliot Lake properties were completed by the year 2000, so the ongoing staffing requirements are for the operation of the five effluent treatment plants; all of which are fully instrumented. And we have a supervisory control and data acquisition so we, the unmanned plants that we monitor remotely, we attend those daily. The staff is also for we undertake monthly inspections of all of the tailing facilities and we perform the environmental monitoring. But there is no ongoing construction or large projects going on at the site since we completed our closure activities in 2000.

MEMBER TOLGYESI: Usually when you restore the tailings, et cetera, you know, you revegetate if you do so, and there is also -- always the part of that those areas were the vegetation fails. Do you express these kind of problems and what you do?

MS. BERTHELOT: We have had a long history.

The initial revegetation of the sites in Elliot Lake actually started back in 1974, so we had a long history of looking at what technologies worked. When we went through closure in 1990-92 as part of the closure planning process, we looked at the different types of coverage we could install to ensure sustainable vegetation. We've been through the process of areas by, for example the Nordic West Arm or Pronto where we did not have successful vegetation at first. We've put in a capillary barrier or we've put in other soil covers to ensure that sustainable vegetation. So we've been through that 10-year process of that follow-up to the original decommissioning and so the vegetation now on the sites is stable and performing.

MEMBER TOLGYESI: How you control the access? My understanding was that the whole sites are fenced? Does it mean that the tailing points are not fenced or they are fenced also?

MS. BARTHELOT: The sites are not fenced. There's -- we hold 7900 hectares in the region around Elliot Lake. What we have done is put in controlled access points. Any of our main access points into the tailing facilities are gated and barricaded and signed. We have taken up -- any of the historic access sites have been dug up and barricaded to prevent access coming into the properties. And that's how we control the access to the

properties.

MEMBER TOLGYESI: And you are successful even during the winter with skidoos and the four-wheel drives and all that? Because, you know, we experience some problems with this.

MS. BARTHELOT: I'd love to sit here and tell you we're 100 percent successful in keeping the vehicles off the site. We're not quite at a hundred percent compliant. We do undertake a number of outreach programs with the local hunter and trappers, people who have traditional access to the sites as well as the hiking and naturalist groups and are public communications to ensure that the public is aware of where the property boundaries are, where they shouldn't be travelling. And we do work with the local enforcement to discourage people from entering on to the site.

MEMBER TOLGYESI: It could sound funny; what you do with beaver control? Because it could cause lots of problems.

MS. BARTHELOT: It's not funny and it's -- we actually take very seriously. We do have and have been through a process of identifying all locations on the properties and mapping them where we have potential beaver activity. We've entered into agreements with all of the local hunters and trappers so that they know there is a

need to be trapped. Our current maintenance provider goes out and inspects those locations on a monthly basis as part of the program. And we trap and remove those problem beavers on a regular basis.

THE CHAIRMAN: I'd just like to follow -- to finish on the winter people coming into the sites. Is there any risk to those people? I'm trying -- because I'm looking at some of the radiation doses, et cetera. Is there any risk for some of those people who are coming with skidoos or snowshoeing or whatever?

MS. BARTHELOT: No, when we undertook the initial closure and the environmental assessments, we actually looked at the gamma fields on the sites and assumed that there would be a 200-hour per year casual access to the facilities. We undertook the dose calculation and those showed that the average dose to the member of the public on the property for 200 hours in the given year would be 16 microsieverts per year, so well bellow the public dose limit.

THE CHAIRMAN: Thank You.

Mr. Tolgyesi?

MEMBER TOLGYESI: This is to the staff; when you were presenting this radiation protection, I suppose that the 2005 year is a typing error there because average individual effective doses .22 and the maximum individual

effective doses is .047.

Just a second, in the Slide 11.

MR. ELDER: Just clarified, yes, it is a typo. It should be a .47.

MEMBER TOLGYESI: Yeah. Okay. And at the same table, you know it's -- when you're looking 2007 as a kind of high values, it was some reasons for that? Eventually, it came back to the levels in 2005?

MS. BERTHELOT: Yes. All of the doses as you know are below the public dose limit. None of our workers have had any reported gamma doses on the TLD badges. The dose that you're seeing there is an estimated and calculated dose for radon exposure. In 2007, we undertook some energy conservation measures at our treatment facilities and when we had the -- saw the increase in the dose, we've now gone back and tied -- hardwired all of the ventilation into the light switch so that when our workers go into the plant, it automatically starts the ventilation. And that's why you see the decrease in the dose in the subsequent years in 2008 and 2009.

THE CHAIRMAN: Does that -- Northwatch, you've seen -- Northwatch argues that in table 7 -- over the years, you'd expect there would be a downward trend in particularly every measure that you see. And they argue that your table doesn't reflect that. How would you

explain this?

MS. BERTHELOT: There wouldn’t -- because we took -- we changed the radon levels in the plant are driven by the ventilation and so, when we made the change in the ventilation, that why we saw the increase in radon because we weren't moving the radon out of the building.

So you would expect over a long time to see a decrease in a radiation dose but if you change a parameter like the ventilation in the building that’s what caused that increase in radon within the treatment facilities themselves. And therefore we now changed the ventilation back and hardwired it in so we don’t have that occurrence again. And that’s how that physically happened in the field.

THE CHAIRMAN: So since you have done this, you already start to see this downward trend?

MS. BERTHELOT: Yes, if you look at the results in 2009 and 2010, the doses have come down from what you observed in 2007. And we can tie that directly back to the radon monitoring that we conduct in the treatment plants themselves.

THE CHAIRMAN: Staff?

MR. ELDER: Peter.

I just want to add, you’ve got a good explanation why there would be an increase during the year

and obviously when they saw the increase, they took action to figure it out and reduce it.

But they should, yes, still come down. But, you know, we're talking with isotopes with very long half-lives. They're not going to come down dramatically or there'd be a very, very slow decrease in these ones; and they're a stable workforce. Activities are stable but you're talking with very -- you know, the radon, these are daughters of the uranium, they're coming out and it's -- will be -- we do not -- the source term hasn't changed significantly over that five-year period.

It will be hundreds of years before you actually see a real decrease in the source term.

And bear in mind in these numbers, these are the workers, you know, these are fractions of a -- you know, they're even less than one millisievert when our public dose -- a worker dose limit is 50, so these are below our public dose limits.

So they're -- for a workforce, they're actually quite small.

THE CHAIRMAN: Well, given that this is indefinite licence, we are here for the 100 years here.

MR. ELDER: Right. So you ---

THE CHAIRMAN: So we want to make sure that we set up a benchmark here.

MR. ELDER: I can see. But when -- we are seeing -- and one of the things that we looked at is saying when they see -- Rio Algom saw an increase, even though the numbers are still quite small they looked into it and tried to understand that increase and took action to correct -- to make sure that they had proper ventilation in those facilities.

THE CHAIRMAN: Mr. Tolgyesi?

MEMBER TOLGYESI: I have one more and I will stop.

When we go into financial guarantees, on page 23 of the staff presentation, is that the financial guarantees for -- secured by letter of credit for eight -- seven sites?

The eighth one, Stanleigh, is a kind of contractual arrangement between Rio Algom and Ontario Hydro but on the table you are using 10 sites. So what's happened with these two additional? I think it's the Denison and Stanrock, Can-Met.

MR. ELDER: So just -- one of the things, I think going forward and not only a five-year update on a plan is that while this request was related to a Rio Algom licence, Denison also controls some of the sites and it's a joint project.

So going -- the next time around, this will

be an update on all the sites because they're covered by the same program. So the other two sites are Denison and they have the separate financial guarantees under Denison.

MEMBER TOLGYESI: Okay.

MR. ELDER: Okay. And we recognized after we looked at the -- as we were writing it that there was confusion on number of sites; going forward, this will be a report on the whole Elliot Lake region, including the Denison and Rio Algom.

THE CHAIRMAN: So this does not represent the Denison report?

MR. STENSON: Ron Stenson, for the record.

Certain aspects of this CMD don't reflect on Denison, for instance financial guarantees, virtually everything else does because the Serpent River Monitoring Program is for both licensees, it's for every mine in the basin.

And the public information program, although there's components that are individual, it's a joint public information program.

As you could tell by the map the mines, regardless of ownership, are interlinked. And so -- through the -- that's why we went to the Basin Monitoring Program so that we could capture all of the impacts from all of the mines and not just concentrate on one licensee

or the other.

So although we talk about Rio, the results that we're talking about reflect both Denison and Rio's activities in the basin. It's only when we get to licence-specific things, like financial guarantees that we're not discussing Denison.

THE CHAIRMAN: But just administratively, there will not be yet another interim report from Denison?

MR. STENSON: No, there hasn't been a request for that.

But the reporting on the environmental monitoring, in particular the big component that we're discussing there, the state of the environment report, in fact reflects both licensees.

THE CHAIRMAN: Okay.

MEMBER TOLGYESI: On the same page, the conclusion, what you are saying, that its current financial guarantees are 38.4 million, and that financial guarantees in place in 2012, the financial guarantee is sufficient for foreseeable future.

What it means "foreseeable future", how many years and what after? Because we are talking about -- here about the long-term.

So how you bear with that?

MR. HOWARD: Don Howard, for the record.

When we talked about financial guarantees is that we -- CNSC staff has a program where we re-assess financial guarantees on a five-year basis.

So every five years, we will re-examine the financial guarantees and the adequacy of that financial guarantee for the next five years and beyond that.

So when we talk about the foreseeable future, we're talking over the next 5-10 years maximum, and then we re-assess as time goes on. Depending on the conditions of the site; things may have improved reducing the financial or may increase the financial guarantee so we re-assess every five years.

THE CHAIRMAN: You didn't answer the question though, what's the relationship with OPG to one of those lakes?

MS. BERTHELOT: The Stanleigh facility is operated under contract to Ontario Power Generation and under that contract, they are responsible for the closure costs for the sites. And that's why the financial guarantee for Stanleigh is different than it is for the sites -- the other sites that Rio Algom owns in the Elliot Lake area.

And the financial guarantee for the Stanleigh site is provided by the Province of Ontario through a Memorandum of Understanding with the federal

Crown.

THE CHAIRMAN: But that's what I'm trying to figure out. Is that because of historically it was a Crown Corporation?

How did the government got into this?

MS. BERTHELOT: My understanding is that that happened at the time that they went through closure, in the 1990s that is part of that review process. That agreement was reached between the provincial and federal Crown.

THE CHAIRMAN: Go ahead.

MEMBER TOLGYESI: I'm coming back to these sites. Denison you said it's another set of agreement or other report, but Stanrock, Can-Met, what Can-Met is doing there; that's a Crown -- Crown business?

MR. ELDER: So one -- maybe we need to, at some point, give you a historical on the uranium. Uranium mining in Canada has a lot of interesting peculiarities, I guess, in terms of -- at some point in the past when the main miner was actually Eldorado or Eldorado was -- had sort a monopoly on the refining of the uranium they -- there was some sort of fiduciary responsibility in mining companies.

And you got into the same situation with some of the Elliot Lake companies where Ontario Hydro had

long-term contracts for the uranium and essentially these -- this was a -- some of the mining sites were developed solely for Ontario Hydro.

So they were their only customer of the ore was Ontario Hydro and they were only developed because of the long-term contracts with Ontario Hydro.

And this gets into these peculiar arrangements about who has the liabilities in the long-term that have been negotiated over the last 20 years, and including going to court sometime. But there have been a lot of negotiation that set to this one where you'll see in some -- when we talk in this case, Ontario Hydro and partly the federal government has some liabilities on these ones and other projects you'll see coming forward.

The Gunnar project, we'll give you update and it's a mine -- that there is a federal liability because it was very tied to Eldorado even though it wasn't operator owned by Eldorado.

THE CHAIRMAN: Ms. Velshi?

MEMBER VELSHI: Thank you, Mr. President.

My first question is for Rio Algom. In the CMD on page 13 the CNSC staff have identified the need to better understand the rates of natural processes effecting radium levels and the potential for bioaccumulation of contaminants in plants and fish.

Can you comment on what action, if any, is being planned to address this, please?

MS. BERTHELOT: Yes. Debbie Berthelot, for the record.

The processes that control the radium releases at the Elliot Lake facilities that is driven in part by the concentration of radium in the tailings themselves, the rate that the sulphate levels are decreasing, we do expect to see the concentrations of radium increase as the sulphate decrease. That's been a long established part of the modelling.

It's also driven by the depth of the reactive zone and the presence or absence of a cover, whether that be water or sediments over the radium -- over the tailings themselves and the hydrologies of the basins.

Rio did, as part of this State of the Environment Report issued in 2011, reassess and reconfirm the rates of radium release at both of our Quirke and our Panel facilities and found that those rates were within the original predictions of the EIS that initially formed the basis of closure.

So we have been, on an ongoing basis, evaluating those radium release rates and confirming that they were in within the range of what we originally anticipated.

Some of the mechanisms of that actual control have changed -- are different than what we thought they might be. Instead of a gypsum release it's a barite release. But those are some of the very subtle changes that we are evaluating and continue to evaluate as part of our performance monitoring.

MEMBER VELSHI: Okay, so just to confirm, you're not planning on doing anything else; you're getting a good handle of what the mechanisms are, okay.

The next question is also for Rio Algom. In the CMD on page 19 CNSC staff have highlighted the possible issue of high polonium-210 levels in forage fish. So it's a multi-part question. How serious an issue is this? Is this something that was anticipated and what are you planning on doing about it, please?

MS. BERTHELOT: The issue of polonium and forage fish came about as the results of the State of the Environment Report and some enhanced and broader radionuclide monitoring that we did as part of the environmental effects program in 2009.

What we've done to go back and reassess that is in the fall of 2011 we actually went back into Quirke Lake and sampled not only the forage fish but also sport fish tissue, and some additional macrophytes.

The results of those direct measurements of

the sport fish tissue show that sport fish concentrations are 10 times below thresholds that are established for protection of human health.

And we also -- if you look at the sport fish tissue concentrations they are 10 times lower than what we see in the forage fish and have demonstrated or suggested that there is not any bioaccumulation of polonium-210 occurring in Quirke Lake.

MEMBER VELSHI: The submission from Northwatch states that over the last decade there have been major and unanticipated release of tailings. It sounds rather serious. Can -- I'll ask the staff first to comment on that, please.

MR. STENSON: Ron Stenson, for the record.

There have not been releases of tailings from the decommissioned facilities over the last 10 years.

MEMBER VELSHI: So do you know what Northwatch may be referring to in their submission?

MR. STENSON: They may be referring to historical -- before closure, before decommissioning spills or -- which did occur back in the operating days, but I don't know.

MEMBER VELSHI: Okay. Good to hear that.

And my last question, CMD page 24 on the Joint Review Group -- maybe I'll ask Rio Algom and then

the Ontario Ministry of Environment representative to comment on that.

What contribution did the JRG have in the State of the Environment Report, and from your perspective how effective is this forum, please?

MS. BERTHELOT: Actually, the Joint Review Group has been a very effective forum for the Elliot Lake facilities since the mines reopened in 1974, and they provide a good basis for the provincial and the federal regulators to get together. They participate in our annual meetings.

And then both sets of regulatory agencies actually sit and participate in the workshops that we do when we initially issue the regulatory draft of our State of the Environment Report and we can sit around and talk about any issues, any follow-up studies. And we undertake the same exercise when we do the design of the monitoring program.

So we can all sit and have a very frank discussion about the requirements and the performance of the program, and as a licensee we found it a very effective mechanism to address the requirements of all the regulators in a very concise and scheduled manner.

MEMBER VELSHI: Thank you.

The Ministry of Environment rep, do you

have anything to add to that?

MR. DORSCHT: Ron Dorscht, for the record.

I would concur; the Joint Review Group process has been very effective over the years of getting the regulated body, as well as the regulators in the same room together for reviewing reports and for doing inspections.

So I would think it's been very effective and would hope it would continue into the future.

MEMBER VELSHI: Thank you.

Mr. President, I'll save my other questions and see what questions my colleagues have.

THE CHAIRMAN: There will be a next round.

Monsieur Harvey?

MEMBER HARVEY: Merci, monsieur le président.

First question is starting to well understand the process, the contamination will be there for hundreds of years, and in your conclusions you are saying that the watershed is recovering.

Will there be a point in the future, even if the contamination is therefore hundreds of years, where the recovery will be sufficient to say that the monitoring could stop?

MR. ELDER: Peter Elder, for the record.

I guess it would be too soon to say that you will get to that point, but there is potential that you could in the future, but there would have to be some monitoring.

A lot of when they did the decommissioning there were a lot of measures put in place to make sure that any contamination wasn't spread, and so there's a lot of ongoing maintenance and monitoring required to make sure those barriers are working as required.

On the -- you know, whether you need to have as an extensive of a monitoring program outside or further away from the sites is something to look at, but really this is only their first report, five-year report.

And I'll pass it back to our environmental risk specialist who will probably tell you they want many years of data.

MR. RINKER: Mike Rinker, for the record.

I think what I'd like to speak to is the process that we'll go to evaluate, you know, the adequacy of the monitoring program and how it would be adapted in the future.

First of all, there is a very strong environmental monitoring program for the environment. There's a separate monitoring program for what gets released from facilities. There's another program that

monitors the behaviour of those facilities right now. So it is well monitored.

But the CNSC is considering the use of a set of CSA Standards for environmental and effluent monitoring that are tied to a standard not yet published for environmental risk assessment. And the idea is that for Class I facilities in uranium mines and mills -- and these facilities fall within those classes -- is that routinely every five years or so we'll be re-evaluating the risks of the facilities, and as risks drop away so would the need for monitoring certain aspects.

So I would expect the monitoring requirements for this facility to alter over time, but informed through a proper assessment of the environmental risk.

MEMBER HARVEY: What about the treatment, water treatment? This is the same ---

MR. RINKER: Mike Rinker for the record. The standards include environmental monitoring as a separate standard, effluent monitoring as a separate standard ,and then environmental risk. So we would be definitely looking at having Rio continue with their monitoring of their effluent, and treatment of effluent, and monitoring what's in the basin. So we would be looking at how this source (inaudible) changes over time;

is it as predicted?

Predictions suggest decades more of control so, we're looking at decision points down the road, but I just wanted to inform you there is a process that we'll be looking at this and making decisions as the risks fall away.

THE CHAIRMAN: So let me ask a more generic question, not necessarily for this particular site, but in general. Why can't we at least based on the current knowledge and the advanced science and predictions say that you'll have to monitor this for at least for the next 500 years?

The reason being that, you know, you keep talking about how things are progressing et cetera and it begs the question that was just asked as to, so what's the endgame, and why can't we revise our endgame as we go along as we get more and more data, but at least have an endgame. And maybe in this particular facility what I'm interested is when is Rio Algomo stuck being the custodian and you revert it back either to nature or to another government?

Why all of this cannot be part of the description of an endgame?

MR. RINKER: Mike Rinker -- sorry Peter.

MR. ELDER: Sorry. I'm going to start on a

very -- just to point on something, is what you're talking about is where we want any future uranium mine to be going, that you think about the endgame before you actually build it.

What is different on this one, is again this is -- we were learning things about these tailing management everything while these mines were operating.

So certainly going forward we're looking at making sure that you don't get in a situation where you have to have many years of water treatment after a facility's closed.

But in terms of this one I'll pass it back to Mike and you can see on how we're trying to approach these ones as well.

MR. RINKER: Mike Rinker for the record.

There is first of all estimated timeframes of which the facilities would require treatment and I think Rio would have information on that, it varies from 40 years to 100 years depending on the facility.

But I think for mine waste in general we have predictions that are based on theory, but things can occur and I think we saw that with radium where -- radium is within the value as predicted but at the very upper end of those sensitivity analyses. So we were surprised with the mobility of radium suddenly changing when we thought

it was stable.

Similarly we see that in Beaverlodge where similar types of waste, radium values are now increasing when they've been stable for decades.

So we do need to see how mother nature would affect how these facilities would operate over time to have some -- so we'll continue to learn and monitor to have confidence in whether those numbers of when we would shut down this facility would work or not.

THE CHAIRMAN: But like we do even in budget forecasts we just budget every three years because we're so uncertain. Why can't we actually release such those predictive numbers and modify them every time more data comes along?

What I'm trying to understand, why is it such -- maybe it's not a good idea to release such numbers. Do you actually have a number that would say that you now forecast to be in this business for the next 40 to 100 years?

MS. BERTHELOT: Debbie Berthelot for the record. The licence that we hold from CNSC is an indefinite license and we expect to manage those sites for an indefinite period of time. The financial assurance is set up in that way.

The treatment periods we do expect

treatment at the flooded facilities to require 10 to 50 years. In those facilities by flooding them we've been able to prevent the acid generation which has reduced the treatment requirements at those facilities.

At our vegetated sites we expect to require treatment for a period of 75 to 125 years. The performance monitoring indicates that the acidity releases from those facilities has peaked and is now declining.

THE CHAIRMAN: So are those numbers that you just mentioned, are those known numbers, published numbers? Are they any sensitivity in those numbers being known with the public?

MR. BLACK: I believe they're already published in the CMD as it stands now. Those were predicted numbers I think based on the available science.

THE CHAIRMAN: I may have missed them ---

MR. ELDER: Peter Elder. One of the things, there's no secrecy in this, there were environmental assessments done for these decommissioning and all the predictions were in the environmental assessment.

One of the things that we are working on that Mike Rinker had talked about, was then the process for how do you formalize the reassessments as you go forward in time.

So we're looking at this and, you know, this is a five-year update. Maybe at the every ten years or so you do need to revisit your risk assessment and your predictions and say, where am I and how are you doing on that one? But we need enough data to understand what's going on.

And one of the things that we've come up on some studies is the older the mine, and we knew less about actually what was there, the poorer the predictions.

So the more -- you're refining all the science as you move forward. But one of the things we'll look at going forward on these ones is at some point, yes, you need to revalidate your predictions and talk about your predicted behaviour versus your actual behaviour.

THE CHAIRMAN: I think it's a good idea, because I think you're going to get this question from us on every mine, on every decommission facility that's still under monitoring as to what is the endgame, and it would nice if you came up with some predicted endgame.

We understand the uncertainties associated with this and we understand the long-term view, but I think it's nice just to ground us with some realistic views as to what is the endgame.

Mr. Harvey?

MEMBER HARVEY: My other question is about

the dams, dikes and spillways and structures. You mentioned a number in the presentation I didn't catch the exact number, but maybe could give some information about the importance -- the number and the importance of those structures; are all small structures, but there is some that are more important than others?

MS. BERTHELOT: Debbie Berthelot for Rio Algom for the record.

The Elliot Lake facilities include a total of 58 dams, dikes and other structures at the eight Tailings Management Areas. Each of those structures is inspected monthly or quarterly during the snow-free season. We have an annual geotechnical inspection that's completed as the staff indicated.

An important part of that process is also our dam safety review. The last one that we had undertaken was in 2005, and based on the findings of that it will be repeated again this fall in 2012. And what that process does is it looks at the design basis for hydrology, for the earthquakes. It revisits all of those, reassess all the structures and confirms that those constructions meet current standards as well as their original design standards.

So we have a very comprehensive monitoring program for those structures.

MEMBER HARVEY: Could you give us an idea of the importance of those structures, the size and the -- because we only have one I think one picture, and it's a very small one.

MS. BERTHELOT: I do have pictures of each one of the facilities, if the Commission would like I've got it on a stick, I can put them up on the screen if you'd like to see what they actually physically look like.

MEMBER HARVEY: No, my point is it's different to monitor a very small dam than a big one. So in big dams you've got to have instrumentation and all of that. So that's the purpose of my question.

MS. BERTHELOT: Yes, and there are -- I would probably say there -- and this is going off the top of my head, of those 58 structures probably 15 or so of them are of significant size and all of those have been instrumented. We do dam instrumentation that's monitored twice per year. That information is reviewed as part of the annual geotechnical inspection.

So there is a wide variety of the size of structures that we have at the sites and we adjust the management requirements for those structures in accordance with the Canadian Dam Safety Association.

THE CHAIRMAN: If you give the stick to our technical support here we -- I'd love to see some of -- a

representative of those structures while we continue with our questions.

MEMBER HARVEY: Okay, I can…

MR. ELDER: If I may, Peter.

We have our geotech expert who looks at these dams. All the dams are risk -- are categorized based on risk so he can give our opinion on where the -- out of those 77, which are the major ones.

MR. SU: For the Member of record, my name is Grant Su. I'm a Geo-science Technical Specialist with CNSC. Also I'm a CNSC representative for the regulation of dams and the Public Safety Committee in the Dam Safety Association.

The dams in the Rio site, if you talk about the sites, it's -- from very small to bigger one and the small dams has a height of about maybe 1.5 metres. The highest one is about 25.-some metres. So that's a main dam in Quirke.

So when you talk about the dam safety you need a reference to the Dam Safety Guideline of Canada. So according to the Dam Safety Guideline the dam was classified according to their potential failure consequence.

So the Dam Guideline in 1999 that was referenced by the Dam Safety Review the dam was classified

from the no-consequence dam to -- from very low to low, high and very high consequence dams.

And the different dams they have different requirement for the Dam Safety Review for the frequency. The very high dams, their review frequency is every five years. For the high consequence dams the review frequency is seven years. No dams is 10 years.

So when Rio, looking at the Dam Safety Review of the dams at the site is they follow the guideline requirements.

THE CHAIRMAN: Does that include a seismic vulnerability? So what is the high-risk -- the highest risk dam they have in there, what is that seismic robustness?

MR. SU: For the record, I'm Grant Su.

Yes, and the Dam Safety Review is a very comprehensive program. They're looking at is dam design and dam performances within this period and any change during this period. And also the classification of the dam and the stability of the dam and the stability include the static loads and also seismic load as well.

So they has a consequence for the dams at the Rio site is classified as high, and is the level above the medium but it's not the extreme class.

THE CHAIRMAN: I'm trying to get a feel

for, so I always ask the same questions; doomsday scenario, big, big earthquake right under the dam, the dam is broken, what are the consequences? What will happen; does it wipe out a settlement nearby? What are the consequences? Anybody knows? Rio Algom, go ahead.

MS. BERTHELOT: It's Debbie Berthelot, for the record, for Rio Algom.

The design objectives that were established for the Elliot Lake structures was no deformation in a 1/1,000 year return earthquake, no loss of containment for a 1/10,000 year earthquake.

What they've done is we've had the geotechnical engineer has reviewed the seismic record from the Canadian Geological Society to determine what the design event that meets that design objective would be and we've looked at a range of events from a 5.5 magnitude earthquake occurring within a 22-kilometre radius of any structure, as well as a 7-magnitude earthquake occurring within 80 kilometres of those structures.

All of those designs were re-evaluated as part of the Dam Safety Review and they were found that those design standards for the design event were current with the 2005 Building Code of Canada Revisions. They've been re-assessed, each and every structure, according to that and confirmed that the risk for each of the

structures was acceptable under those design standards and those design events.

In addition, we have worked with -- we have had a dam break analysis done for the key structures at each of the sites and looked at what that floodplain would look like and been able to confirm that there are no residents or communities living downstream of those structures.

THE CHAIRMAN: So you sound like a real wonderful engineer reciting design-base risk analysis.

But nowadays with one thing that we're very sensitive to is beyond design, because you're looking at emergency planning.

So the question is always -- I don't care about the design basis, what I care is the doomsday scenario that something very, very low probability but high impact area.

So the dam does break down and you're telling me there's no community nearby so you don't need to go through a very elaborate emergency planning. Did I get it right?

MS. BERTHELOT: All except for the emergency planning.

We do undertake -- because of the size of the structures and the potential for loss and having to go

back and redo them, we do do extensive emergency planning for those facilities.

We have annual training with our staff, as well as with the reclamation and closed mines group, out of Tucson, there's a very formalized business continuity plan should there be a dam failure.

So we have taken a very serious and informed approach to our emergency response planning for those structures.

THE CHAIRMAN: Thank you.

Dr. McDill?

MEMBER HARVEY: Maybe before that, if we have some pictures, it'd be a good idea to ---

THE CHAIRMAN: Do you have those pictures?

MS. BERTHELOT: Debbie Berthelot, for the record.

Yes, I do.

So this is the Serpent River watershed. The facilities that are owned by Rio Algom include the Panel facility, up here. We also own the Quirke facility, here.

We have a very small Spanish-American flooded tailings here that actually discharges into Denison. This Denison facility and the Stanrock facility are actually owned by Denison Mines Inc. The Stanleigh

tailings management area belongs to Rio Algom, and the Lacnor and Nordic facilities also belong to us.

This Milliken's tailings management area is actually a very small historic spill area that only has about 76,000 tonnes of tailings and then there's one other facility down on the north shore of Lake Huron called Pronto -- that makes my map too small if I include it on this particular graphic.

This is the Panel tailings management area. What you're seeing out here is Quirke Lake; this is the north -- the main basin, so here you can see one of the perimeter structures here. This has a spillway that then comes into the south basin. You can see another part of the containment structure over here.

These are -- this is a treatment facility. There's two sets of settling ponds and then there's a discharge that goes into Quirke Lake.

So that's a basic overview of what one of our flooded facilities looks like.

The other facility that we have, this would be the Quirke tailings management facility. This has a 14-metre drop and is built in a set of sequential cells. So Cell 14 would be at the far west end and it comes down with about a three-metre drop, which means that that's the height of what these internal dikes are and it comes down

into Cell 18 where we have a treatment plant and then it enters into the settling ponds. This would be one of the main structures for the Elliot Lake facility, that would be the main dam. And it's probably about, speaking off the top of my head, at a height of about 20 metres. And it comes down through the treatment facility and discharges into the Serpent River.

The small facility upstream of Denison is the Spanish American facility. It actually discharges -- this is what you're seeing in the background is the flood Denison Tailings Management area. It has two very small outlet berms, their height would be about a metre and a half to two metres high, and it discharges into the Denison Tailings Management Area.

This is the Stanleigh Tailings Management Area. You can see here would be the dam-C is one of the containment structures here. Here's the dam-B containment structure. And up at this end would be dam-A. One of the things that they took into consideration for this facility, in terms of, you were talking about public safety, we purposely built these structures on this east end of the facility five feet lower than that at the west.

The west end would go out towards the City of Elliot Lake and the city's drinking water supply. So in order to protect that drinking water supply we actually

built the structures on this side lower so that if we did have a major flood event it would preferentially go away from the community.

This would be the Milliken Tailings Management Area. You can see these are the rehabilitated mine sites. This area is a flooded tailings management area that then flows into Elliot Lake.

This is the Nordic Tailings Management Area. Here is the first of the vegetated tailings. This is the perimeter structure that you're seeing here. And this area up here is actually the re-vegetated and stocked tailings.

If you look along the toe of this structure you can actually see that we've installed the toe berm to provide that level of stability for the structure.
This is our Pronto Tailings Management area. This would be the north channel of Lake Huron down here. It actually has a watershed divide in the middle of it. So we have an east drainage channel and a west drainage channel.

One of the projects here when you were asking about sustainable vegetation, is this is an area where we did apply paper mill sludge in order to make sure that we could maintain a sustainable vegetation down in that area.

And that's just a quick picture of what our

facilities look like currently.

THE CHAIRMAN: Thank you. Very useful. Dr. McDill.

MEMBER McDILL: I was actually here when we created the indefinite licence.

I believe our intention at the time was it was sort of one of the first (inaudible) into the indefinite period. And there had been, as was mentioned, a beaver dam failure which had caused considerable consternation in the community because the community thought it was something bigger that had failed, than a beaver dam.

And so the Commission at the time wanted to have, as I recall, kind of an oversight of what was happening as we went into the indefinite. There's no grammatical reason why you can't have multiple interims, but I understand your concern.

I think the fact that we have contributions from North Watch and Serpent River, right? Serpent River First Nation is an indication that what we intended actually came to pass. They did contribute, which is very good. And hopefully some of the questions they have raised have been answered today.

For example, I think one of the concerns was that there's an independent examination of the major

structures every seven years by a professional engineer, but there are multiple other inspections going on. And I think one of the things that is not clear is that those other inspections are going on. At least not clear to the community, it's clear to the staff.

And perhaps one of the things that can come out in the next report is some kind of summary of everything that's happening on a cyclic nature. Because that's one thing that's missing in this report, is we look at these things every X months or every X years. And that I think might be, without going into an annual report that's extremely detailed, maybe something that would be helpful to the community.

North Watch does ask about gamma, so I'll pass the question on to staff and to Rio Algom. In terms of the radiation protection program, perhaps you could just outline what is being monitored and what is estimated dose.

MR. ELDER: I guess we'll start. I'll ask our key people to look into this one. It is a combination, like in many areas where you don't rely only on the direct measurement that there are actually some calculations as well, but I'll ask Caroline Purvis to give you some more details.

MS. PURVIS: For the record, Caroline

Purvis.

So as was previously discussed the gamma dose rates are at approximately background levels. Staff are wearing TLDs, and there's no recordable doses over the past number of years. In the CMD the effective dose values reflect only radon progeny exposures as was discussed previously.

MEMBER McDILL: So you believe that the point -- that there's no need to have levels of gamma radiation reported at every site because they are now at background; is that correct? I had two people speaking in your ear simultaneously.

MS. PURVIS: I'm sorry, I didn't catch all of your question.

MEMBER McDILL: Fine. I'll repeat it. The statement by the intervener is that the radiation protection is so overly general that it fails to provide any actual information about site conditions. For example, what current levels of gamma radiation at each of the sites, variation over time, et cetera.

Your statement is that they are background, so there is no variation over the site to be reported; is that correct?

MS. PURVIS: I believe that our CNSC staff members that work on the file do conduct their inspections

yearly. And during those inspections they do take dose rate measurements. It's been reported that the dose rate measurements during their inspections are at background levels. And that is certainly confirmed by the recording, or lack thereof on the TLD readings for workers. There may be variations from one location to a next, but in relation to the background levels they are the same.

MEMBER McDILL: I'll ask Rio Algomo to comment as well.

MS. BERTHELOT: When we went to the closure of the sites there was a full gamma scan done of all of the properties. There was an established gamma grid criterion of 100 micro R per hour. Any area that exceeded that grid criterion and was cleaned up and reduced to that grid. The CNSC at that time came in and did an independent audit of all of those findings. And those values were used then to calculate the potential public access dose for a 200-hour a year casual access to the facilities, and that average dose was 16 microsieverts per year. So there is very protective of public access to the sites.

MEMBER McDILL: I think as we go forward into this indefinite licence a lot of this information is not going to be -- you will know it, and some others will know it, and a few staff members will know it, but in a

hundred years or so none of us will know it. And so there needs to be some way of keeping that information current. And I don't know what that mechanism is.

THE CHAIRMAN: Well, I was going to jump in. What is the public outreach? Are you going to be -- do you have any presence on the web and all this data why don't you post them? Even if they are routine, and even if they are background the best storage place now is to make them public.

Do you have any web outreach? I don't know where the public outreach program online is.

MS. BERTHELOT: Rio undertook a very formal review of our public information program in both 2005 and 2008. And the results of that survey actually indicated that for the community that we operate in, that web access was not the preferred method of communication. They actually preferred a direct interaction with the members of the community and we've worked very hard to form our public information program around that.

The elements of our public information program include an annual newsletter that goes out to all members of the public. In addition, we print about 10,000 copies. We leave copies at the Welcome Centre. We leave them with the real estate agents, so that anybody coming into town actually has access to this information. We do

a semi-annual presentation to all of the local governments that are interested, including the Serpent River First Nation.

The one that's enjoyable to do is part of the Uranium Heritage Festival. We sponsor a bus tour that the mining museum sponsors, and so we've got members of the community -- we usually have a participation of about 150-200 people, on an annual basis, and they're our captive audience for three hours, to be able to tell them about our facilities, about exactly those kinds of issues and what the public dose exposures are to those members of the public.

And we've also established outreach with the hunters and trappers, the naturalists, and the hikers in the region; because we found that there was a loss of knowledge. There's been a tremendous demographic change within the community.

In order to protect against that loss of knowledge, our best thing was to have outreach to those different community groups. And we actually go out and meet with them on an annual basis as well as we have projects with them, like what we've done at the Sheriff Creek Sanctuary which was actually recognized in the last year by the Ontario Mining Association, our partners, the City of Elliot Lake and the members of the Naturalists

Club, for the work that they do within that area on a -- to recover it and rehabilitate it. But it provides a basis and a common evaluation of the information that we provide.

THE CHAIRMAN: The only thing I would say, and that's great, all the public outreach you're doing, but since 2008 the connectivity of Canadians is increasing all the time, social media coming in -- it'll be a shame not to post data that you have available.

And I'm also directing -- it's staff, you know, we -- on the CNSC site, there's community-specific site. Again, if we do some of our own inspections, et cetera, why wouldn't we post them? That will be my observation on this, and just for your consideration.

Dr. McDill?

MEMBER McDILL: I was going to ask a question much like that, but maybe I can recast it.

I think the oral tradition actually has a heritage of some thousands of years, and the web tradition is somewhat newer, but I think CNSC certainly could have a role to play there, for interveners such as this, who want to go look for it.

The community, I think the bus tours and things like that, are probably better in establishing overall knowledge of the population base.

THE CHAIRMAN: All the above.

MEMBER McDILL: All the above, yes.

I'm just concerned as we go forward on an indefinite licence that some of this is going to be lost and I'm looking for a place -- and I'm going to ask staff to comment -- for a place to keep it.

MR. ELDER: Peter Elder, for the record.

We do monitor it and obviously we've been looking at, as you're aware, public information programs and how they need to evolve.

One of the things we've actually done in this case, to show -- because we knew, based on what they were doing, that -- what Rio Algom was doing was very -- based on presentations, information to the Commission, we actually gave you example as attachment to CMD, which I don't know if exactly what Northwatch was looking for, but it does have the public dose in that presentation, with the actual values for each site.

So we had looked at it from a -- you know, when you're summarizing from a regulatory perspective, is there an issue here? You know, there were two things: From a regulatory perspective, we don't think there's an issue with the public doses, and we were looking and saying the information is available to the public members, based on the information we've seen on the -- what we know

about the public information program.

We also had inquired in what their practices are, Rio Algom's and Denison's practices are of giving copies of their state of the environment report to anybody that wanted it. So while they don't necessarily publish -- they're not publishing on their web, they are making copies available to anybody that asks.

You know, those are the questions we asked, and, you know, we'll continue to look at them and ask them. I think like any public information program, they're doing the right thing of occasionally you going back to your target audience and seeing what do they want? And I think one of the things we'll look at is saying, "How do you then protect this for the future as well?"

MS. BERTHELOT: If I can, if I may? With respect to the -- for example, the dam breaking, you know that if the dam breaks there's no population, but this comment didn't know that, and that's where I think the gap is. It's not with Rio Algom and it's not with staff; it's somewhere out there in the community.

Thanks, Mr. Chair.

THE CHAIRMAN: Okay, thank you.

Any other -- round two kind of questions?

Monsieur Tolgyesi?

MEMBER TOLGYESI: Coming back to these

public relations, you know, there's a joint regulatory group and that -- considering citizens' concerns. And Elliot Lake's efforts, because I was hearing that Elliot Lake tries to attract senior citizens, to be a kind of, you know, senior citizens' township in Canada.

Did you think about to have a kind of joint citizens' follow-up group which will be kind of formal, meet them once or twice a year, and so you have a kind of formal interaction with the population?

MS. BERTHELOT: Debbie Berthelot, for the record.

First off, yes, Elliot Lake has been highly successful in their retirement living initiative. They're now at 98 percent occupancy, and moving on to cottage lot development. So we have seen a tremendous change in the demographics of our community.

We did at the time that the closure planning was going on sponsor a decommissioning review and advisory committee. They at their own bequest and initiative decided that it was becoming -- the sites were becoming so stable that they wanted to look at other issues within the watershed. So they have become what they call the Serpent River Regional Environmental Association.

We usually have a presentation or a session

with them on an annual basis, and they are one that they participate in the annual joint review group tour of the sites, and we do provide them copies of the annual reports and the state of the environment report, in electronic format.

MEMBER TOLGYESI: You're talking about Serpent -- I think SRL, eh? SRFN? No?

MS. BERTHELOT:: SRFN would be the Serpent River First Nation.

MEMBER TOLGYESI: Yes.

MS. BETHELOT: The Serpent River Regional Environmental Association ---

MEMBER TOLGYESI: Okay, sorry, yes.

MS. BERTHELOT: --- is the local environmental group. There's also the East Algoma Stewardship Council which we interact with as well.

MEMBER TOLGYESI: Could you tell me, what's the population of Elliot Lake these days?

MS. BERTHELOT: The population of Elliot Lake is 13,500-14,000 people.

MEMBER TOLGYESI: And when you're talking about these activities, like semi-annual presentation, bus tour, what's the attendance? Is there quite a high attendance? A is it composed mainly of local citizens or they are tourists and whoever? What's the attendance?

MS. BERTHELOT: Debbie Berthelot, for the record.

We offer four bus tours and it's the two days before he Uranium Heritage Festival, and the two days after. We have a full bus on all four days. So we have -- and a bus is 40 people, so we have between 150 and 200 people that go through -- that tour the sites, for those public tours alone. We also do tours for general interest groups.

What we find in the first question asked when they get on the bus is, "Who's lived her for 20 years?" and I might get two or three hands, and when I get down to, "Who's lived here for five years?" I'll get -- 80 percent of the hands will be people that have been there for less than five years, and they just want to see what's behind those yellow gates.

And it's been a very effective public information process for us, and we're very thankful that the City of Elliot Lake, through the Mining Museum, helps us organize those on an annual basis.

MEMBER TOLGYESI: What's the feedback of these people? You know, they come to visit, and after what are they saying? What's the perception?

MS. BERTHELOT: The perception is very good. Certainly the comments -- as people get off the

bus, they're smiling and very happy with me, or very happy with what they've learned. I've gotten no complaints about them. We get very little public feedback from that perspective, our care and maintenance contractor reports two or three inquiries on an annual basis.

We are very fortunate that we can work with the marketing arm of retirement living, who has eight to ten individuals come into their offices to promote selling, or -- of the cottages or the apartments on a daily basis.

They report to us that they get maybe one or two inquiries a month of people looking to move into the area. They provide them a copy of the annual newsletter. They give them my name. They give them Ian Ludgate's name who's the manager at Denison, and we probably get two or three inquiries on an annual basis.

But that gives us a really good way of keeping track of what kind of questions are being asked, and are information products effective for the community that we're serving.

MEMBER TOLGYESI: Is there, besides Serpent River First Nations, are there other First Nations?

MS. BERTHELOT: Our interaction is predominantly with the Serpent River First Nation because it's their traditional territory that is in the area

surrounding us. On the adjacent side to the west is the Mississauga First Nation who deal predominantly with Cameco and the Blind River refinery in that area.

They have not historically demonstrated any interest in what is occurring with the Serpent River.

MEMBER TOLGYESI: Because what they are saying here that they should be adequately consulted; that's in Serpent River presentation page 2, second paragraph.

So how far you are you are involving the First Nation?

MS. BERTHELOT: Rio Algomo engages the Serpent River First Nation on a regular basis, in addition to making sure that each and every member of the band gets a copy of the annual newsletter. We make ourselves available to the chief and the Lands and Resources Committee to participate in meetings that they may have.

We have had outreach working with Denison. We have hired a Serpent River First Nation summer student when we undertook the Stanleigh project, to perform the environmental monitoring work there. They have then come back and worked on some of the seasonal labour.

We also engage the Lands and Resources Commission of the Serpent River First Nation to actually undertake the fish and water fowl consumption study that

we did as part of the last date of the environment report. So that involved having a harvesters' workshop actually at the First Nation in the band.

They then went out and surveyed 20 households as to determine where they're eating fish from, and how much wild fowl they're eating, and we use those in our radiological dose models. And they also performed the water fowl habitat assessment on our six area study lakes.

We've been back and shared the results of the state of the environment report with them with the Lands and Resources Committee on one basis, as well as at a community feast subsequent to that meeting prior to the publication of the report. So we do have a very engaged and interactive relationship with the Serpent River First Nation.

THE CHAIRMAN: Well, this is a good time maybe to, if you read the Serpent River First Nation intervention here, they raise some issues. The first one is an aboriginal consultation.

So I didn't understand the difference between what they're saying about consultation, and I'll start saying that they didn't have a meeting. Can somebody clarify about this meeting that happened or didn't happen?

MR. ELDER: Peter Elder.

We clarified, there was a meeting. The meeting was for where -- in the case where there was a licence amendment associated with changing one of the berms. So when there was an actual licensing decision, yes, we just talked -- it was specific meeting about the -- what was going around that licensing decision that included an environmental assessment.

So that was I guess a focus meeting on one topic. In the report we had also contacted them and said, "Do you have any general comments about how the overall monitoring is going?" So I guess we approached them on two different topics. And we didn't suggest to indicate that we had not had any contact with this group over the last five years, it was saying in specifically about the monitoring program.

THE CHAIRMAN: There's obviously misunderstanding about the various responsibilities are involved here. If you read in staff documentation on page 11. And talking about all this is an information piece and there's no trigger of the duty to consult. So obviously that is not what the First Nation understand or believe. So why is it not being clarified?

MR. STENSON: It's Ron Stenson for the record.

I could have chosen my words maybe a little

more precisely, and in one way I interpreted the situation too precisely. So what I had intended to say was that prior to inspections I contacted the First Nations and asked if they would like us to come and visit them to talk about general issues, or concerns, or to keep them informed about the results of the inspection.

And there's been no request to do so during the period of time when I've been inspecting during 2009, '10 and '11. And that's really what I was referencing. And it was meant to be more of an affirmation that they didn't have concerns because they didn't respond to our invitation to engage. It was meant more of an affirmation or a positive message. It wasn't intended as a slight to them. And I certainly didn't mean to imply that we don't consult with them.

The meeting that they're talking about was to do with consultation on a licensing issue to do with a Denison site. And in that regard my interpretation was focused on Rio. And so I took it too narrowly in my statement.

We do recognize our duty to consult during decision processes, and we do take quite seriously the best practice of engaging all communities and all interested parties during our day-to-day practices, our inspections, or any other time that we're doing work in

the area.

So the words could have been chosen better and I apologize for any confusion that it caused.

THE CHAIRMAN: But in general terms maybe we can hear what is -- do we have any obligation in terms of all this monitoring, ongoing monitoring to explain what's going on?

MS. MANN: Kimberly Mann for the record.

As this was a meeting and there was not going to be any decisions that could have an adverse impact on rights, then we're not triggering any duty to consult. But when we look at aboriginal consultation we're also looking at relationship building, which is why we continue to engage the community for this monitoring program, for the Blind River where they presented to you back in Port Hope.

So we want to continue to have communications with them regardless of any legal obligations. But in this case because it was a meeting and we understood no decisions would be made, it wouldn't official trigger the duty to consult obligation.

THE CHAIRMAN: You know, that's a legally correct answer, but nobody outside this room, and maybe many in this room don't understand or care about, I think your second part of the response about building

relationship is the right answer. So the question is, obviously there's a misunderstanding here and a misconnection here.

So moving forward what is it you propose to do, Staff, about repairing some of the misunderstanding here?

MR. STENSON: It's Ron Stenson for the record.

We'll continue to communicate with the First Nation to contact them when we're going to be going into the neighbourhood to do any work, and invite to meet and provide an invitation to be with. We'll continue to provide them through the public outreach and the public information programs with any documentation that's for review.

And it's -- you know, I think that our practices in the past have been honest and forward, I mean, we've been doing everything we can to communicate.

The fact that these sites don't have a lot of -- they have annual reports and they have annual inspections, but these are not operating sites so we don't have, you know, monthly contact or monthly triggers to do things. It's, you know, we only have so many opportunities to present ourselves to the First Nation and we'll just continue to keep doing that.

THE CHAIRMAN: Okay. Now a couple of quick question about the environment. They did raise an issue about lead that's in the table the lead doesn't meet the Ontario -- sorry, iron, I'm sorry. I don't know where I got lead, iron, sorry, I take it back.

So they have concern in the cumulative effect on fish, and there's some charts that you presented in there that shows fish consumption, but I couldn't understand the so what, is there a long term impact of some of the fish in some of those places being consumed. So maybe some clarification of that. Staff, why don't we start with you?

MR. RINKER: Mike Rinker for the record.

There is iron values that exceed the provincial water quality objective, but that's just in relation to the fact that there is an environmental footprint for these facilities, and the environmental footprint is shrinking.

But iron is not a health risk to people, it is, if anything it's a risk to the benthic communities which would then be food for the fish.

But consuming fish with elevated iron levels is not a health risk. It's a risk to the environment, and there is direct evidence that the benthic communities are improving, the environment's improving

over time.

So we're talking about something that is residual from the cleanup activities.

THE CHAIRMAN: So Rio Algomo when you're making those slide presentations which I found very interesting, it's in an appendix to the CMD, I think you know -- do you know what I'm talking about?

There's a lot of slides here that shows some of the environmental numbers, and there's always showing the limit and then there's over the limit. But there's never kind of an explanation, the so what kind of thing.

Do you verbally explain it or do we as a reader have to understand it from the charts?

MS. BERTHELOT: What you have there would be presentations that are made to local interest groups, so there is a very extensive verbal explanation that goes along with them.

With respect to iron for the water shed for example, we do monitor both upstream and downstream of the mining operations. The reason that that value is set at .47 instead of .3 is because if you take the average of the reference locations which are upstream of the mining operations, that value is .47, which indicates that there's a natural enhancement of iron within the

watershed.

We can't expect the values downstream to be lower than they are upstream if it's naturally elevated in that environment.

So when we do these presentations with those water quality objectives we will identify where that source has come from, whether it's come from background or whether it's a provincial water quality objective, and that those are set for -- those objectives are based on the protection of aquatic life, and we go through that explanation with the members of public verbally when we undertake those presentations.

THE CHAIRMAN: So just so I understand, so you have a slide here about fish consumption and it shows Lake Huron, and then other, and then there's Elliot. What I'm trying to understand, so what is the explanation that goes with this chart?

MS. BERTHELOT: Okay. And that would have -- and I'm just trying to remember which particular -- that would have been one of the presentations with the Serpent River First Nation soon after we had completed the wildlife consumption study with them.

This fish consumption chart that you're referencing was actually the results of the water, fowl and fish consumption study that we undertook with them.

And what this is showing is that we asked them, "Where are you collecting your fish, where do you eat your fish from?" And this is showing that when they go out and they eat fish they eat fish from Lake Huron or other, and the footnote isn't in there, "other" meant lakes downstream of the mining operations, and then we included those other six lakes that are on your graph, are the six lakes that we use in our radiological dose assessments.

So we would have gone through that explanation during the presentation to the members of the public with the key message that the predominant consumption of fish by the members of the Serpent River First Nation is actually from Lake Huron, which makes imminent sense because their reservation is right on the lake itself.

THE CHAIRMAN: So there's no really safety risks that the data indicates?

MS. BERTHELOT: If you look farther on in that presentation it would have led into a discussion of radiological dose risks. And then what we did was actually use this data to calculate the dose for a member of the Serpent River First Nation based upon the consumption values they gave us, and those came in at .06 millisieverts per annum. And we would have compared that relative to both the regulatory risk, as well as the

Health Canada guideline of .3 millisieverts, as well as common interactions like airplane flights or living in Denver.

So it would follow a sequence of information to make sure that they could understand the information when it's provided to them.

THE CHAIRMAN: To the Ministry of Environment, a lot is written here about the JRG, the work that they're doing, et cetera.

So is it my understanding that there are no minutes and it's kind of an informal meeting? There are no minutes that are available to see what they're up to, what are they discussing? So that's my one question.

My second question is, do you, the Ministry of Environment, do your own environmental monitoring and checking, in other words testing?

And last, you actually authorized a certificate of approval on many of those issues. So are you satisfied everything is okay?

MR. DORSCHT: Okay. Ron Dorscht for the record with the Ministry of the Environment.

I guess the first question with respect to the JRG and minutes, I guess other members there can correct me if I'm wrong but when we do get together we don't have a formal minute taker, so we don't take

minutes. But it's a group that was just created to meet as required like annually for inspections or ad hoc when we do report review.

When we're doing the report review though there are like a formalized compilation of all the comments on those reports, and then the proponent then responds to those comments.

Secondly, the last two questions, I guess they can tie in together. When we participate in the annual inspections often we're there just to observe the site conditions from year-to-year. But at other times and because we do hold certificates of approval, we do undertake our own monitoring, our own samples as well.

And if at any time any of those results come back and show anything different than the internal monitoring then we would definitely bring that up. But to-date we've been satisfied with compliance with our regulatory approvals, and I'll end it there.

THE CHAIRMAN: Thank you. Anybody else? Ms. Velshi.

MEMBER VELSHI: Thank you. Just a very quick question for staff. In your slide deck on slide number 16 on your conclusions, I just wondered why for environmental monitoring program, and given all that we've heard, I mean, we don't expect to hear from the licensee

and you on this file for the next five years, why you say that there are no immediate environmental concerns? Why the qualifier immediate, whereas for all the other programs you just say, hey, you've got no outstanding concerns?

MR. STENSON: Ron Stenson for the record.

We do have some as highlighted in the presentations and some of the answers to some of the questions that you've already asked, we do recognize that there are some residual environmental impacts, and we do recognize that there are some potential changing environmental conditions as the sites evolve.

So the qualifier was put in more to say that we're monitoring the situation were, you know, certainly we don't have any concerns today. We don't feel that just making a blanket statement would beg the question then why are we continuing to have such an intensive monitoring program and why are we asking them to do more work on polonium or why are we asking for explanations of mildly elevated iron or so on.

So I put the qualifier in only to imply that we don’t have any immediate concerns but that the book is still open, we’re still monitoring the progress of the sites and watching for any potential adverse effects.

MEMBER VELSHI: Thank you.

THE CHAIRMAN: Anything else?

Okay, thank you very much.

We will take a 10-minute break, back at 11 o'clock.

Thank you.

--- Upon recessing at 10:53 a.m./

L'audience est suspendue à 10h53

--- Upon resuming at 11:05 a.m./

L'audience est reprise à 11h05

5.4 Atomic Energy of Canada Limited: Update on the National Research Universal Reactor Vessel Inspections

THE CHAIRMAN: Okay, the next item on the agenda is regarding Atomic Energy of Canada Limited for an update on the National Research Universal Reactor, NRU.

I'll turn the floor to Mr. Lesco from AECL for his presentation as outlined in CMD 12-M19.1 and 19.1A.

Mr. Lesco, the floor is yours.

12-M19.1 / 12-M19.1A

Oral presentation by
Atomic Energy of
Canada Limited

MR. LESCO: Thank you very much, Mr. President and Members of the Commission.

Good morning, ladies and gentlemen. For the record, my name is Randy Lesco and I'm the Vice-President of Operations and Chief Nuclear Officer of Atomic Energy of Canada Limited.

With me here today are Colette Taylor, AECL's Acting General Manager of Engineering and Chief Engineer; Andrew White, AECL's Chief Regulatory Officer. We are also joined by other members of AECL.

We are here today to provide an update to the Commission regarding the NRU reactor vessel inspections, specifically inspections completed since our Day Two relicensing hearing.

AECL continues to operate the NRU reactor safely. All inspections completed to date demonstrate the ongoing fitness for service of the NRU vessel.

Today AECL will focus its update on the following areas, the current status of inspections, the results obtained from the inspections and the planned inspections for the 2012 extended outage.

I will ask Colette Taylor to provide additional details on these topics.

MS. TAYLOR: Good morning, Mr. President and Members of the Commission.

For the record, my name is Colette Taylor and I am AECL's Acting General Manager of Engineering and Chief Engineer.

Our update today will provide the Commission Members with background and context on the NRU vessel inspections, the current status of inspections, results obtained and information regarding future inspections of the NRU vessel.

The NRU reactor was shut down in 2009 to repair the calandria vessel wall after a small leak of heavy water was detected.

The reactor remained shut down until August 2010 while repairs were made to the vessel, specifically the leak site and other thin walled areas.

During the 15-month outage comprehensive repair and inspection plans were developed, as well, unique inspection tooling and specialized procedures were produced and used to successfully repair the NRU vessel and to demonstrate fitness for service.

Since return to operation in August 2010 an in-service inspection program, that is an ISI program, is

being followed for the vessel condition monitoring that is required on an ongoing basis. The information acquired through the ISI program forms the basis for confirming NRU vessel's fitness for service.

The ISI program is laid out in inspection cycles which run over a one-year period. Today we're in the middle of the second cycle with the third cycle beginning in August 2012.

The ISI program is ongoing and will be revised to incorporate new inspection scope and intervals as required.

The in-service inspection program is designed with several objectives in mind; first, is to re-inspect the repair welds to ensure that no new indications have initiated during operation of the reactor.

Second, is to re-inspect previously identified indications in the repair welds to determine if any changes have taken place.

The two repair welds that are inspected contain indications remaining from the repair process. Engineering evaluation of the inspection results have shown that these indications do not pose a risk to reactor operation.

Wall thickness measurements at various locations of the reactor vessel are also an objective of

the ISI program. These measurements enable the engineering evaluation of the ongoing fitness for service of the NRU vessel.

A key objective of the ISI program is to perform the volumetric inspections of the repair weld lower heat affected zones called the lower HAZ. The lower HAZ inspections are considered to be baseline inspections that ideally would have been completed at the time of the repair.

This chart identifies the inspection purpose and the type of inspections we employ. To confirm that no new indications have initiated or previously reported indications have changed, repeat post-repair inspections have been carried out on two of the repair welds.

A suite of repeat post-repair inspections includes the following: Ultrasonic inspection of the weld to obtain wall thickness and detect lack of fusion between the weld and the vessel wall, ultrasonic inspection of the weld heat affected zone to detect surface and subsurface indications, eddy current inspection of the weld crown to detect surface indications, ultrasonic inspection of the plate edge welds to detect lack of fusion between the edge of the plate and the adjacent weld and visual inspection of the repair weld.

Corrosion of the vessel wall is monitored by performing wall thickness inspections and comparing the results with past thickness measurements, as well as performing visual inspections from the annulus side.

Inspection of the lower heat affected zone of all repair welds forms part of the post-repair inspection. This area receives an ultrasonic inspection to confirm there are no indications that require monitoring. In some cases the location of the weld on the vessel wall requires a complementary eddy current inspection.

This chart details the status of our ISI plan when we last met on October the 4th, 2011 at the AECL Day Two hearing. All wall thickness inspections of the vessel surface were completed and we had exceeded the planned inspection coverage.

The repeat post-repair inspections were also completed as per the ISI schedule, as were the visual inspections of the vessel. There were three full inspections and three partial inspections completed of the weld lower heat affected zone.

Let me take a moment and explain how AECL is accounting for the inspections of the lower HAZ. At most lower HAZ sites it is possible to obtain a volumetric inspection with ultrasonics alone, however, on welds that

are lower on the vessel wall, both ultrasonic inspection and eddy current inspection are required.

Some lower HAZ have a partial inspection completed, as we were prepared to conduct the eddy current inspection at that site, as scheduled, but unable to do the ultrasonic inspection.

At sites requiring the two different inspection techniques a partial inspection is noted when only the eddy current inspection has been completed. The outstanding partial inspection is complete when the ultrasonic inspection has also been accomplished.

It is also notable that one of the 11 sites needing a lower HAZ inspection is a test weld and not a repair weld.

As of now, AECL has completed six full and two partial inspections of the 11 weld lower heat affected zones. During the maintenance outage in October 2011 a small leak in heat exchanger number six was discovered and our resources were diverted to address this issue resulting in the deferral of two inspections.

The deferral of these weld lower HAZ inspections was not due to tooling issues or inspection methods; it was solely due to emergent work.

In this instance the decision concerning the rescheduling of these inspections was based on the

existing fitness for service assessment and on the results from past inspections.

These two deferred October inspections and all remaining lower HAZ inspections will be completed in the 2012 extended outage beginning in mid-April.

All inspection results continue to show that there are no new reportable indications found during any of the inspections to date. No evidence of wall-thinning or growth of weld indications were found, nor were there any new reportable indications identified.

With respect to the weld lower HAZ non-destructive examinations, no reportable indications were found.

Extensive inspections were completed during the 2011 extended outage and the subsequent planned maintenance outages that occurred in July, August, December and January. Inspections to date confirm that the NRU vessel continues to be fit for service.

This chart details the inspections required as per the ISI plan, those that have already been completed and those inspections scheduled for the 2012 extended outage. Some wall thickness and visual inspections were completed during the regular maintenance outages.

While performing the lower HAZ inspections

at a given location it is efficient to also carry out other wall thickness inspections planned for that location.

There are nine repeat post-repair inspections required in the ISI plan and all nine are scheduled during the 2012 extended outage.

We also plan on inspecting the wall thickness over a span of 2,700 millimetres. Three visual inspections will be done, finally three full and two partial low HAZ inspections will be completed.

All inspections specified in the ISI for the first two cycles of the ISI are scheduled to be completed during the 2012 extended outage.

There were many lessons learned from the 2011 extended outage and these lessons have been applied to subsequent inspections and to preparations for the 2012 extended outage. As a result, we are able to carry out the inspections more efficiently and effectively.

Some of the equipment used in the 2011 extended outage has been redesigned. For example, motor housings were redesigned for better sealing, preventing water damage to both the inspection tool and the visual camera system.

Mock-up facilities in NRU have been enhanced to better simulate top of reactor and in-vessel

conditions.

As AECL progresses through the ISI plan and with each new outage the staff who execute the inspections become more experienced in the tasks and more confident in what they are undertaking, thus increasing our assurance of success for the 2012 extended outage.

While evaluating the previous outages potential failure modes were assessed and the analysis was incorporated into our training plans, continuing to improve our operator training.

A dedicated team of experienced tradesperson and professionals have been retained, ensuring consistency of operation.

We have also adjusted our tool deployment schedule to better optimize contingency plans; this adjusted schedule is intended to improve the ability of the dedicated inspection team to respond to issues that may arise due to changes in the outage schedule.

This also provides an opportunity to perform mock-up testing in NRU between inspection deployments and to perform tool maintenance if required.

The effectiveness of these improvements has been demonstrated through the on-time completion of inspections during the scheduled monthly outages in July, August, December and January. For these reasons, we are

confident that we will be able to complete the inspections as planned during the upcoming 2012 extended outage.

In summary, over the past two years a multi-year in-service inspection program has been developed and implemented for the NRU vessel.

All required inspections are on schedule for completion by the end of the 2012 extended outage in May and all inspections to date confirm that the NRU vessel remains fit for service.

Thank you very much for your attention today. The AECL management team and I would be pleased to respond to any questions you may have.

THE CHAIRMAN: Thank you.

Before getting to the question I'd like to hear from CNSC staff and their presentation as outlined in CMD 12-M19.

Mr. Elder, the floor is yours.

12-M19
Oral presentation by
CNSC staff

MR. ELDER: Thank you. Good morning. My name is Peter Elder. I'm the Director General of the Directorate of Nuclear Cycle and Facilities Regulation.

With me at the front table are monsieur Christian Carrier, a Director of the Laboratories -- Nuclear Laboratories and Research Reactors Division and Mr. Etienne Langois, a Project Officer in that same division.

We also have a number of specialists with us today to help answer questions.

Our presentation, like AECL's, focuses on the progress with inspections of the NRU reactor vessel, specifically the post-repair inspections.

At the October 2011 public hearing for the renewal of Chalk River Laboratories operating licence, CNSC staff reported that AECL had not yet completed all of the required NRU reactor vessel inspections.

These inspections were originally to be completed within nine months of the reactor restart which took place in August 2010. As has been noted, key outstanding activity were volumetric inspections of the lower heat affected zones of the weld repair areas.

CNSC staff position in that time that complete inspections of all weld repairs were required for two main reasons, and is technically in terms of providing a baseline for future inspections and to ensure that there was a valid ongoing fitness of service case for NRU vessel.

In terms of the timing, we did have a concern about too much work being put into the second extended outage, and this is -- our view was what happened on the first one, it was over-ambitious. And in October there wasn't -- while they had been able to do some inspections during short outages there were still new tooling that had to be -- that had not yet been tested.

So we were -- felt it was -- would be good to come back at this time to give you a progress report before that extended outage, if any remaining concerns about the scope of the second outage inspections and if there were any remaining outstanding issues with equipment.

So respecting staff's proposal the Commission requested that AECL submit an update on completion of the NRU vessel inspections by the end of February 2012.

Our CMD has given our view of these inspections and AECL's progress since October 2011.

So I'll turn it over to Mr. Carrier to do a summary of the information.

MR. CARRIER: Christian Carrier, for the record.

I will begin by providing a few slides, providing historical background on this matter.

This figure provides a top-down view of the reactor core. Here you can see fuel element positions in the core, shown by small little circles, and the vessel wall which is the larger circle around the fuel elements.

Surrounding the reactor vessel is what we call the J-Rod annulus. This annulus contains irradiation sites that are no longer in use. They are commonly called the J-Rod sites, on the right side, and the bismuth sites on the left side.

The 2009 vessel leak occurred in the J-Rod annulus, near the place marked with a red X on the bottom right corner.

Following discovery of the leak AECL conducted detailed non-destructive examinations to further assess the condition of the vessel.

Degradation was primarily observed in the lower portion of the vessel where their leak had occurred. This figure that you can see on the screen represents the results of wall thickness measurements for the full circumference of the reactor vessel. Thicker areas are shown in dark and lighter coloured areas are thinner.

These measurements were taken at the bottom portion of the vessel about 30 centimetre height from the bottom.

As you can see on this figure these

inspections revealed several areas where corrosion had occurred. The specific leak occurred at the J-Rod 41 site, which is on the bottom right corner. At that time it was determined that repairs to the vessels were required to stop the existing leak and to prevent other leaks from occurring and to reinforce the vessel where it was required.

The red rectangles on the screen show the locations of ten areas where repairs were conducted. The 11th rectangle is the Bismuth 41 site that was actually a test weld.

This slide shows an example of a specific repair site on the vessel, specifically this one was taken at the leak site.

The approach to repairs vary from site-to-site. In this specific case the backing strip or metal plate was tacked to the interior or the vessel wall, to cover the leak site itself, and the repair proceeded by covering the full area with overlays of weld.

Inspections were required to confirm the quality of all the repairs. These included thickness measurements to verify that enough material had been added to the wall and that it was properly fused to the original surface.

Surface inspections of the repairs were

carried out to check that there were no crack-like flaws and volumetric inspections of the heat affected zones surrounding the repairs to verify that the welding process did not create additional flaws.

Prior to the reactor restart in 2010 all necessary post repair inspections had been performed with some exceptions, those were in the lower heat affected zones that are located at the bottom between the repairs and the bottom of the core.

These inspections could not be carried out at that time because of unavailability of tools and because of access restraints and restrictions.

Approval to restart the reactor was based on two conditions at the time; 1) AECL was to complete the outstanding post repair inspections no later than nine months following reactor restart; and 2) AECL was to develop and implement an inspection program to monitor the integrity of the repairs and rate of vessel wall corrosion.

Vessel inspections were intended to be completed during the June 2011 extended outage. However AECL was faced with difficulties early on during the outage.

The inspection tool for the lower heat affected zones proved to be not ready for use at the time.

Also AECL was faced with an additional challenges. These included, for instance, conduct of inspections in a fuelled reactor and this time it was full of heavy water, so new tools had to be developed and new approaches to inspections. As a result most of the inspections were postponed to future short monthly outages.

Performance of the inspections during monthly outages since last October has had some success. Three additional volumetric lower heat affected zone inspections have been completed, and the special head that was required for inspection of J-Rod 13 and 17 and J-Rod 23 sites have been developed and tested. This new tool has been used in January and successfully used to complete an inspection of the J-Rod 41 site.

As of today volumetric inspections remain outstanding for five of the lower heat affected zones. Surface inspections for three of these sites also remain outstanding. However partial information is available for two of these sites, specifically surface inspections. Completion of these inspections is now planned for the 2012 outage scheduled between mid-April and mid-June.

In conclusion, AECL has not completed the committed inspections as planned. As a consequence baseline information remains incomplete and re-inspections may be required if inspections are found.

However AECL has committed to conduct the outstanding inspections during the 2012 extended outage. Necessary tools are available and they are operational. So we conclude that there are no technical impediments to complete those inspections.

CNSC staff position remains that a well executed and timely inspection program of the NRU vessel is essential to ensure continued operational reliability. The delays in inspections do not pose a short-term safety risk. However AECL needs to meet the current inspection schedule to support the long-term inspection program for monitoring of the vessel.

To increase confidence and continued safe and reliable operation of the NRU vessel we conclude that there should be no further delays in the completion of post repair baseline inspection beyond May 2012.

CNSC staff will report on the result of the inspections in the annual report on CRL, planned for the fall 2012.

AECL would be required to report any further delay in completing these inspections prior to reactor restart in May. This is required by the Licence Condition Handbook.

CNSC staff would in such a case report to the Commission at the earliest meeting following

notification. In such circumstances CNSC staff would recommend the addition of another extended outage for AECL to complete those inspections.

This concludes our presentation, we are now available to answer any questions you may have.

THE CHAIRMAN: Thank you. Let's start with Dr. McDill.

MEMBER McDILL: Thank you. First let me state at the outset that I think the repair of the vessel was, and remains a significant engineering and scientific achievement. Everything from the numerical analysis, my personal favourite, all the way to the development of new tools and the implementation of those tools and the use of those tools. So that's the starting point.

My concern is the issue of fitness for service, and the fact that the return to service inspections won't be completed until 20 months into a five year license. Is that right, 20 months into a five-year licence; is that correct staff? Is that right? Twenty months into a five-year licence; is that correct, still?

MR. ELDER: Peter Elder for the record. It's 20 months from the return to service.

MEMBER MCDILL: Service, yes.

MR. ELDER: So it's -- but the licence renewal is about a year and a bit into that. But it's 20

months from the vessel going back into service.

MEMBER MCDILL: So my concern is this: AECL has broken two promises to us at least, but two that I'm -- the promise to do the inspections at the first outage was perhaps overly optimistic, and I can accept that tools needed to be developed, there were tooling problems. In any kind of development like this that's okay, I mean, not okay but at least can be understood.

The promise to complete the inspections this October appears to have been supplanted by emergent work, and that suggests a shortage of either human or financial resources or both. And failing that inspection why not if the tools were ready was there not at least an attempt in January or February or March to do one each time?

So I'll stop there and I'll pass it back to AECL and then I'll ask staff to comment.

MR. LESCO: Randy Lesco for the record.

Dr. McDill, we had presented a schedule in September timeframe to the staff, and I also reported to the Commission during October re-licensing hearing and we had a clearly laid out plan to take us through to completing those inspections to the 2012 extended outage.

One of the risks that I had identified during our submissions is the development of new tooling,

referred to as ultrasonic head number 5. That was a risk at that time. We have now developed that tooling.

We've developed the technique associated with that tooling and we've demonstrated during one inspection in January. So we had a clearly laid out plan associated with completing those inspections to take us to the 2012 extended outage.

The issue that we had in October was to address a small leak in the heat exchanger. One of the challenges that we face is that when we go in to inspect the locations we basically have to open up the reactor, so to speak.

And for safety considerations to address that issue, we basically had to close up the reactor to allow us to evaluate, to understand the issue so that we could properly address that.

MEMBER McDILL: So the emergent work you -- there wasn't a shortage of human or financial resources, it was a safety issue with respect to the reactor, in terms of the human -- use of human workers. And I'll -- I'm going to pass it back to staff.

MR. LESCO: So that is correct, and you know, we had to address that immediate issue to -- making sure that -- to address the small leak, making sure that the reactor was safe to restart.

I would also like to add that we had communicated that to staff, as well as provided them how we were going to address that deferral going forward.

MEMBER McDILL: Staff?

MR. ELDER: Peter Elder, for the record.

To clarify on what happened in October and what we were communicated, it wasn't necessarily a question of staffing and resources. It was a question of the two -- doing the inspections and doing the leak search were incompatible.

You can't do both at once because you actually -- you need a closed system to do the leak search and then you need an open system to do the inspections.

It does point to an ongoing concern, I think that staff have been raising and why we are looking at saying the possibility of the second extended outage, is that there is a very limited amount of time during a short outage. They're planned for five to seven days and you don't have -- basically, you don't have any room to deal with emerging issues.

So when we're looking at the -- while AECL has been successful most of the time and able doing the work, we still consider that it may be a more -- now that they've sorted out all of their tooling issues -- that having a concentrated period to just do inspections.

And when we say extended, if they can't do it it's not necessarily going to be -- it has to be a month outage, it may be two weeks or something.

And we also believe that from an isotope supply perspective, a planned extended outage where all the other -- where other producers in the market gets plenty of warning is the best way to minimize any disruptions from additional outages.

So when we look into this -- and our recommendation going forward, if they are not able to do everything they were supposed to do in May we've tried the other tactic, is put it in short outages.

We think a longer outage where it's dedicated may be the more -- better solution because there is more predictability to the isotope supply market as well.

MEMBER McDILL: In terms of fitness for service, since we don't yet have a full baseline and since that lower part of the vessel was pretty critical, if -- and this is a big if -- if there is an issue with the vessel where do the problems lie? Is it principally a commercial problem at that point? There's not a safety issue if the vessel should fail? And I'm not suggesting it will, I'm just saying if.

MR. ELDER: As part of our -- we've looked

at -- Peter Elder for the record.

We've looked at it in terms of -- just in the terms of the fitness for safety case, is why we're comfortable in the short term is that where they haven't inspected, they assume there is a flaw that they haven't found.

And you do all of the calculations assuming that there's something there that you -- you haven't looked for it, so you make an assumption that there is something there and do the calculations on how fast could a flaw that's not visible from the surface grow.

Obviously, while you can do it, there's a lot of uncertainty in that sort of calculation, so you wouldn't want to live with that situation for a long time.

In terms of the consequences of a failure, we've looked at this in terms of it -- from what we've looked at this, it'd be mostly a reliability issue.

A failure of the vessel in that location is not expected to challenge the safety systems because of the design of where it is. Our -- when we're looking at pipe breaks, you were mostly looking -- concerned where everything can drain into the basement. Well this is draining into an annulus. That is a little more stable.

MEMBER McDILL: So we have a damage tolerant approach going on with an existing flaw on a

prediction. But I'll -- AECL wanted to speak to this.

MS. TAYLOR: Colette Taylor, for the record.

Yes, based on our fitness for service work that you have already described, the repaired NRU vessel has a large tolerance for flaws and the -- a through wall defect will be stable and the leak rate would be quickly detected by the NRU detection system.

So that's why there isn't a real safety concern.

MEMBER McDILL: Someone from staff came up at the back, was that…

MR. ELDER: Just in case you had a follow-up, he's our actual -- if you wanted more detail on the -- why we're comfortable in short term.

So I'll ask Blair Carroll who's our non-destructive experiment and expert and also -- main reviewer of the fitness for service case.

MEMBER McDILL: Thank you. Yes, please.

MR. CARROLL: For the record my name is Blair Carroll; I'm a Specialist with Operational Engineering Assessment Division at the CNSC.

Just to follow on a little bit, I guess, from what's been discussed.

Yes, we have done a review of the fitness

for service assessment report, and they do postulate a flaw located at the lower heat affected zone of the welds, and it indicates that there is a tolerance against failure of flaws at the locations that are not yet -- having not yet done all of the inspections.

The one issue that we have going forward, looking at it in a longer term situation, is things are not necessarily going to remain stable at that location throughout the entire remaining life of the vessel.

There are two potential factors in the fitness for service assessment report that could change with time, one being the wall thickness. If corrosion should happen to continue -- of the vessel wall-- then the wall thickness will be reduced. That will reduce the flaw tolerance margin somewhat.

The other thing is the vessel is subject to irradiation and that radiation embrittlement is another consideration because the toughness of the vessel could change which would also reduce flaw tolerance.

So given those two potential factors, we believe that for the long-term benefit and, you know, long-term assurance of safety of the vessel, we would want to see the inspections -- the baseline inspections done soon so that we can have confidence in what the actual current condition of the vessel is.

MEMBER McDILL: Thank you.

Radiation hardening is one thing but the reduction in toughness that goes along with this is always a concern.

The one question I have with respect to the one indication which is low and isn't believed to be a concern. Could someone talk to me a little bit about that, on the AECL side and then staff side? It's below the ---

MS. TAYLOR: You're talking about the one below the Bismuth 41? This is ---

MEMBER McDILL: Do we know anything about it other than it's there?

MS. TAYLOR: I can tell you what is in our report, and that is that it's considered to be just excessive roughness of the surface and not in fact a real defect of any kind. But it's going to be monitored going forward.

MEMBER McDILL: And does staff concur with that?

MR. CARROLL: For the record, Blair Carroll.

Yes, we have received information from the AECL concerning that indication. Based on its location it does appear to be that it is an OD surface notch,

potentially a result of corrosion on the OD surface. So it's not located in a position where we would typically look for a heat affected zone flaw.

So I think AECL's assessment that it is in direct result of the welding process is correct. However, they have indicated that they will do follow up inspections, just a visual and a further volumetric inspection to confirm that nothing is changing with time going forward.

The indication is very small and its location is not directly impacted by the weld here.

MEMBER McDILL: And the predicted stress state in that area is not a concern for that particular flaw?

MR. CARROLL: Blair Carroll for the record. No, that flaw size is much smaller than what was assumed in the Fitness for Service Assessment Report.

MEMBER McDILL: Thank you, Mr. Chair. I'll pass it along.

THE CHAIRMAN: Mr. Tolgyesi.

MEMBER TOLGYESI: Merci, Monsieur President.

I second Mrs. McDill to say that when you did the vessel repair it was engineering, operational and technical services. You develop the new tools and

techniques that you demonstrated the technical expertise and capabilities of AECL, but beside these flowers there's also a pot.

And this is the difficulties of the AECL over time to fulfill sometimes its commitment. When you consider these HAZ inspections how important is to you to AECL to complete these inspections compared to other repair and maintenance work? Because these measurement inspections are for long-term where you have other considerations.

MR. LESCO: Yeah. Randy Lesco for the record.

When we were looking at completing the remaining of the heat affected zone inspections and recognizing that we were still developing tools, and we had taken this into consideration when we developed and submitted a plan back in September to Staff, in recognizing that, yes. They are important with respect to the baseline, but also recognizing that we had completed other inspections to-date, including alternate inspection techniques of that area.

We had to balance this with other maintenance activities associated with either fuel handling or control mechanisms associated with the reactor. And that only can be done with accessibility to

the top of reactor.

And so as we move forward we need to balance that with respect to making sure that we're properly maintaining the reactor so that we can operate it safely.

MEMBER TOLGYESI: On the staff report in page 8 in the conclusions you are saying that CNSC staff position remains that well-executed and timely inspection program. What is the definition of "timely inspection"? Is it according to the schedule? Is it as soon as possible, or whenever able, or when nothing else to do; which means not fix it if it's not broken? This is usually a maintenance approach when there is no immediate or short-term consequence expected.

So which one is a timely inspection for you?

MR. ELDER: Peter Elder for the record.

I think you've touched on some of this, is there are different approaches depending on the risks you're seeing from these inspections. We looked at this in terms of we did not -- the inspection plan is AECL's inspection plan, and it takes all these factors into consideration.

So when we look and timeliness is said these are baseline inspections, getting the baseline data

actually helps you going forward, you may have to do it once and never have to come back. So, you know, or you get in a situation that we have on the one where the Bismuth 41 rod that we were just talking, the test weld, where there is something. It doesn't look particularly worrying right now, but you won't know until you go back again.

You know, if he had done this initially you could do a follow -- we would be talking about a follow-up inspection by this time, not figuring out what the original inspection does.

So it's not a simple do it now because it's a high risk zone. But it keeps these nagging questions remaining that just doing the inspection will solve. You get a good base line, then you have a good understanding of what you need to do going forward.

And when we came out of the repairs, the tooling wasn't available, that was understandable and you can't do an inspection that you physically can't do. While there were lots of indications that those tools were under development and had been tested coming into the outage last June, it turns out they had not been tested in reactor. And when they tried -- and when they did going further there were issues about they would not work in the reactor. Again, your same situation, no tooling.

So when we are looking at the progress and how you need the commitments we looked at two things and saying, can you -- can AECL play catch-up during their short outages? But also what's equally important, will they prove, operationally prove all their equipment, then you have a fairly high confidence when you get to the second one that they'll be able to do the whole suite of inspections.

We're in a situation where the tools are all there. The tools work. They know how to work them in the proper environments. We remain unconvinced, frankly, that you can do a lot of catch-up during short outages. Maybe one inspection, two inspections is feasible. Having ten inspections to do puts a lot of stress on a lot of the programs because those outages have other, as Mr. Lesco said, have other purposes, as well.

So going forward what I'm saying is, there's a question now saying, what's the total outage time that is needed for NRU to do all the work you need to do? And is one annual inspection and ten short inspections the right mix, or is it two longer inspections and six, seven shorter ones? And that's where I think we'll need a little more data, not obviously on these inspections, but also on the other work that can only be done during outages.

So we're monitoring this not only in terms of inspections but also the wider work that has to be done during outages.

And again, we'll -- if we go this way we'll come back and discuss it and AECL can present their arguments. We're leaning towards maybe two longer inspections is the better solution.

MEMBER TOLGYESI: What's your comment, AECL? Should, you have some time constraints to do your maintenance and report, just following the problems which you had with vessel? Should you consider that for next year and a half or so, you should revise and extend your outage periods, because you did not complete whatever you had wanted to complete, and during the operations you will have as operational problems, maintenance and repair work. So maybe you should give yourself a little bit of leeway, a little bit of time to make sure that you could catch up. Because you will not, if you have always the short periods, I expect that you will have a hard time to catch up.

MR. LESCO: Yeah. Randy Lesco for the record.

Maybe perhaps I could start off by saying, is that one of the objectives here in terms of establishing the baseline for the outstanding weld

inspections is that, you know, once we demonstrate that everything's okay, it's only when we find something that we have to go back and revisit.

And so clearly as we do more inspections the expectation is that we would have to reduce the amount of inspections because we're confident that the vessel is sound.

To your point with respect to the upcoming 2012 extended outage. You know, I'm satisfied that all the work and all the prep work that we've done that we will catch up during the extended outage.

In the past, leading up to the extended outage, yes, we have actually extended our regular five-day maintenance outage to do those inspections, as well as we have taken other short-term action -- short-term outages to making sure that we complete our other maintenance activities.

So currently we're managing the situation. I think the extended outage come 2012 is key, and that will allow us to actually catch up, if you will, going forward.

MEMBER TOLGYESI: So considering all these delays and postponing, how far we should have a confidence that what you are saying that in 2012 you will catch up? Because, up to know, you know, there were some delays and

postponing's, so to what extent we could be confident that you will do that?

MR. LESCO: Randy Lesco, for the record.

Yes, so since September we have developed the necessary tooling to inspect critical areas referred to ultrasonic head number five. That has been used in January. So we're confident in terms of the tooling that we have now available to complete that.

As well as that, we've only had one rescheduled inspection that we had in October.

So we have, for all intents and purposes, more or less been on track in terms of completing our inspections as of September.

MEMBER TOLGYESI: My last question is to the staff. What if we'll not have -- this will not happen that the inspections will be complete in 2012? How long these inspections could be delayed; I mean, 2013; further? And what's the potential consequence?

MR. ELDER: Peter Elder, for the record.

I think we've discussed this a bit on -- there are assumptions that cover you off in the short-term in the fitness for service report, but there are a couple of factors, the changes in the corrosion, changes in the radiation properties, in the material that make those assumptions harder to maintain in the absence of data.

So we've looked at this as saying -- you know, our position has been, if they're not able to do them, this outage, they really should do them in 2012 at another planned outage. And the only reason we're saying "planned outage" is because it gives everybody a lot of warning that there's going to be another outage that is going to change the isotope supply mix, you know.

Because once you have these, you know, it gets this off the table and then you go on and to looking at the real issues, you know, where -- this is a case where there's unknown information, you know you don't know it, and our position is it's time to just say, "You're capable of doing it, let's go do it."

THE CHAIRMAN: Okay, let's not belabour. There is a proposal here to complete everything between May and June. June is around the corner, we will know what we need to know, and we will -- what you're recommending is that action will be taken after June. Is that the proposed procedures?

And, presumably, if you do not complete it between May and June, you will agree with staff recommendation to do another extended outage. Is that what's being proposed?

MR. LESCO: Well, I guess the -- Randy Lesco, for the record.

I think the point here is that we've a well-planned inspection schedule for the extended outage to allow us to complete those outstanding inspections.

I guess the challenge would be is that what would be the nature associated with not completing them, i.e., a significant technical issue, right, which we believe will not occur.

Having said that, that, yes, the expectation is that if we do not complete those inspections during the extended outage we will have them properly planned going forward.

THE CHAIRMAN: So sometime after June, if you do not complete it, you don't mind coming in front of us and tell us what the new plan is?

MR. LESCO: Randy Lesco, for the record.

That is correct.

THE CHAIRMAN: Thank you.

Monsieur Harvey?

MEMBER HARVEY: Well, I think -- well, I agree with all that has been said by my colleague about the amount of work done and the success, but -- to restart an old vessel, but it's a question of attitude.

I mean, the attitude towards the regulations, towards the licence, toward a commitment, we had problems in the past with this type of attitude and we

don’t like to continue to work with that.

I think the necessity, 20 months after the restart to do the job is there. I mean, that’s been demonstrated.

And if I understand well, reading the top of page six of the staff document, I mean you need -- because the ISI has been defined for the first two inspections, but you need to redefine that program in August 2012.

So to redefine the program do we need to have some baseline data? I just ask the question to the staff.

You’ve got what is written on page six, top of page six.

Because the ISI is not completely described for the future.

MR. ELDER: Peter Elder.

Like any inspection program, you do -- you have to have results to decide what you do going forward.

Let’s just say it would be a lot simpler if they had the data in August when they’re developing their next two years.

It may mean the program going forward is more complex because you’re missing information. If you have this information it may be a simpler program.

But where we are now it’s just saying they have a program that will get all the inspections done in May. We have some confidence, based on the fact they’re using -- there are no issues with the tooling this time. They’ve gone through and they used this. They’ve learned a lot of lessons from the first outage. We have a fair amount of confidence that they can do these inspections in May time.

So if we were going on saying -- we put them in a yellow zone right now but they have a plan that an execution in May will put everything back on track and they’ll be red. They can’t execute -- we’ll have another discussion about how we keep things from going to red, in June, after we’ve seen what it is.

But one of the things that -- I don’t -- maybe we didn’t stress it enough, we should say it again, saying what has changed since October is we do have more data. We have data from one of the complex repair sites that’s using all the new tooling. That’s a big, you know, step forward. It’s not like they went and did the easy stuff; they actually went and did one of the hard ones.

Part of the strategy was always going to be we knew for the hard sites you were going to go back in May, anyways, because you had to look at those repairs. It was always going to be, you’re going to -- it was more

-- for those sites is the question is your tooling going to be available.

Our other concern was some of the less risk -- let's say, lower risk sites in the Bismuth rod, you need to check some of those off their list because -- to make progress.

So if we looked at where we are -- where we were from October or September, to where we are today, we actually have a lot more confidence that they will be able to do everything in May than we had in October even though there has been one slippage.

MEMBER HARVEY: My only concern is the fact that on one side we say it has to be done, that baseline has to be defined, and on the other hand we say we'll keep the door open that it could not be defined in May. So I would prefer to see the door closed, and say you have to do that in May, that's all.

MR. ELDER: I guess -- Peter Elder, for the record.

One of the -- let's not forget, one of the issues is there is a sensitivity around isotope production and some of the actions and what we're taking we are factoring in that sensitivity.

And our experience and going forward is saying if you tell everybody we're going to be down for 30

days in May and if they can’t do everything they’re going to be down for another -- potentially another 30 days in September, you’re not causing any crisis. If you come in and say they didn’t do everything in May and I’m keeping them down for another two weeks right now, you do, potentially, cause a crisis.

So we looked at this and said it's not something you need immediately in June, but we may tell you to plan it and do it in September. And the reason we're giving the planning period is all related to predictability and telling the isotope supply market what's going to be coming.

MEMBER HARVEY: Just a question to AECL. Is the program for the next outage already defined, and will the inspection be among the priority of that program?

MR. LESCO: Randy Lesco for the record. Yes, that is correct. The plan has been established for the extended outage, and yes the inspection's our priority for that outage.

THE CHAIRMAN: Ms. Velshi?

MEMBER VELSHI: Thank you Mr. President. I'm just going to be reiterating what my colleagues around the table have said. There is great unease that we don't know what is going to happen in June if the inspections are not complete.

The staff I think on the one hand have said, look we are going to recommend a second extended outage for 2012, but that the inspections are done. Though I thought I saw a little bit of sliding back on that recommendation. And AECL has said we will come back with a plan as opposed to making a commitment that we will do that in 2012.

And so I would like us to fast forward to June. And I know you're confident right now that the inspections will happen during this coming outage, but if they're not done and yes you don't want to disrupt the isotope production and make sure that your customers know about it, is it not the responsible thing to come up with the contingency plans now, and say, what is it that we're going to do?

I think there's general agreement that we need the baseline, that we need to get those inspections done with priority, why is it that difficult then to make a commitment to get those done this year?

MR. LESCO: So Randy Lesco for the record. Again I'd just like to reiterate the fact that we've come a long way since September of last year to understand what we need to do and feel confident in terms of getting those inspections complete in the next extended outage April/May timeframe.

One of the things in terms of developing a contingency plan is that we would really have to understand the nature in which by which we could not have completed those inspections.

So if there's a technical challenge that we won't completely understand, then we would have to go back and revisit, understand why we weren't able to do those and come up with a definitive plan moving forward. And I think that's kind of the challenge that we have recognizing that again we have developed that significant tooling that we need to do and that specialized tooling. And so we'll feel confident that we'll be able to accomplish the inspections in the extended outage.

MEMBER VELSHI: So if it's not a technical issue, because no one thinks that's going to be a big risk because the tools have proven themselves, putting that aside is there anything else that's stopping you from making the commitment to getting an extended outage and getting those inspections done in 2012?

MR. LESCO: Well there's nothing preventing us assuming that we have no technical challenges, technical risk going forward. There should be no reason why we can't complete those inspections in 2012 beyond anything, beyond our extended outage.

MEMBER VELSHI: Okay. So if there are no

technical challenges the inspections should be done in 2012?

MR. LESCO: Randy Lesco for the record. That is correct.

MEMBER VELSHI: Thank you. And question for the Staff. At what point if the inspections are not done is the fitness for service questioned? You know, is it five years from now, is it later this year?

MR. CARROLL: Blair Carroll for the record. It's difficult to give a specific number of when that date is, but we do have additional confidence over what we had when the fitness for service was originally issued because we do have more in-service inspection data.

And the real key to going forward with the fitness for service criteria or the fitness for service assessment of the vessel, is using in-service inspection data to demonstrate that none of the assumptions made in the fitness for service report are challenged by what's actually happening in-service.

So again, it's hard to put a specific date on that when is that cut-off date, but every time we get more information like this, this remaining baseline data we have more confidence in that none of the assumptions of the fitness for service assessment are being challenged.

MEMBER VELSHI: So if the inspections are

not done in the May outage, for whatever reason, the fitness for service would still not be questioned because there is no additional data to question the assumptions that were made then?

MR. CARROLL: Blair Carroll for the record. The fitness for service assessment for the known inspection results will not be questioned. There will still be the outstanding issue associated with the unknowns.

And if we go back to the situation that led up to 2009 of the vessel leak it was because wall thickness inspections had been done at certain locations of the vessel, but had not covered the entire extent of the vessel where the actual worse corrosion was occurring. So assumption was made that the vessel condition was okay based on the data that we had, but the leak occurred because the data come from a region that we didn't know about.

And again we have to look at what the consequences of a leak are. We've determined that there's no safety impact, but it becomes a reliability issue for a production of isotopes.

MEMBER VELSHI: Thank you, Mr. President.

THE CHAIRMAN: Okay. Anybody has kind of a burning last question?

Let me just summarize, the reason you get this kind of frustration and angst is it's -- the problem is it's not all about the safety case that we're talking about, we're talking about credibility and reputation.

Both of the operators and I must say of the regulator, we approved a ten-year safety case, ten year, not five. Ten year safety case, and we gave you a five-year licence all on the basis of those tests to come.

So we now need to have those tests done, because if something happens it's the reputation and in fact you guys are under the microscope now it's not a good time for you to lose reputation and credibility, I would argue.

And that's why we will see those tests done this year. And we have some pretty strong abilities to put you on a very tight schedule to actually achieving that. And therefore we hope that your commitment for doing it in the May to June will be realized and then we got all the data and then we can move forward.

If not, you saw the risk, staff recommendation, we'll take it under advisement and we hope that still it's all going to happen in 2012 and we can move forward a little bit more knowledge.

So you see the lay of the land, and thank you for appearing here. And hopefully we're not going to

see you in June. So thanks a lot and we will resume at 1:00 o'clock.

Thank you.

--- Upon recessing at 12:12 p.m./

L'audience est suspendue à 12h12

--- Upon resuming at 1:04 p.m./

L'audience est reprise à 1h04

6. Information Item

6.1 Regulatory Framework Program - 2011-12 Annual Report

THE CHAIRMAN: The next item on the agenda is a presentation by CNSC staff on the regulatory framework program for 2011-12 annual report, as outlined in CMD 12-M18.

And I understand that Mr. Dellaire will make the presentation. Please proceed.

12-M18

Oral Presentation

MR. DELLAIRE: Thank you President Binder. For the record my name is Mark Dellaire, Director General of the Regulatory Policy Directorate.

With me today are Colin Moses, acting Director of the Regulator Framework Division, and Kevin Lee acting Director of the Regulator Policy Analysis Division, as well as other staff involved in the management of the regulatory framework.

Over the course of the past few years CNSC staff has come to you on several occasions requesting your approval to publish certain regulatory documents. In 2011 we also presented you an overview of what the CNSC had accomplished in the 2010-11 fiscal year with respect to publications of regulations and documents.

But CNSC Staff has also been focused on building a strong, sustainable framework for managing the CNSC's work on the regulatory framework. We've made significant progress over the past few years in formalizing and documenting the management of our regulatory framework program and have established good practices that allows us to continue to improve upon a good consultation practices, adopting a lifecycle approach to our regulatory framework, and ensuring that we manage the framework with the whole of CNSC vision.

I'd also like to note that as a federal

agency we are impacted by a need to be responsive to what is happening outside our walls. This includes the regulatory reform initiatives on the part of the Federal Government.

So today CNSC Staff will discuss the current regulatory environment and provide an overview of our regulatory framework and the processes we have put in place to ensure we continue to manage the framework effectively. We will conclude the presentation with an overview of our accomplishments over the past year and discuss our forward planning.

CNSC's regulatory framework program has as its principal objective ensuring clarity of the CNSC's regulatory requirements; that's one of our four strategic objectives.

What do we mean by that? We mean that everyone understands what needs to be done, ensuring that licensees, vendors of nuclear technology and proponents understand the CNSC's requirements stemming from the *Nuclear Safety and Control Act*.

Communicating those requirements is essential of course. So the CNSC's regulatory framework program is heavily invested in the publication of documents setting out requirements and guidance for applicants and licensees, and a significant contributor to

the fourth strategic objective, communications.

Later in today's presentation Mr. Moses will provide more detail on the CNSC's regulatory framework initiatives. But before turning the floor to him and getting into the specifics of our activities I would like to provide you with some context, focusing on current initiatives that are underway in government to review and reform government's approach to regulations.

The CNSC is guided of course by the *Nuclear Safety and Control Act*. The NSCA establishes CNSC as an independent regulator, sets out our responsibilities, our authorities, and the elements of an administrative framework that Parliament deemed to be appropriate for regulating the nuclear industry.

As a federal agency we are also guided by the government's regulatory policies. Over the course of the past decade, even longer there has been growing attention to regulation as an important government responsibility, and an area of activity.

In 2004 the External Advisory Committee on smart regulation released its report. The government's response to that report was captured in several ways. First, the old regulatory policy dating back to 1999 was replaced by the cabinet directive on streamlining regulation. I'll speak about the CDSR a bit more in a

moment.

There continues to be a strong focus on all things regulatory. Currently the focus is on streamlining regulatory processes and better collaboration among regulators. The major project's management office is a key contributor to this initiative, as is the work of the red tape reduction commission.

As part of its economic action plan the government is exploring opportunities for improving the efficiency and effectiveness of regulation. And one area where we can expect to see greater attention is on service to Canadians, including more predictable timelines for regulatory permitting.

I'd like to touch briefly on the cabinet directive on streamlining regulations. The CDSR came into effect in 2007. While much of the CDSR was already part of the government's regulatory policy, the CDSR did place much more attention on some key areas, as noted in this slide.

One area receiving greater attention was on the lifecycle management of regulations, it is not sufficient to create and enforce regulations. It's incumbent on all regulators to refuse those regulatory requirements on a regular basis to see if they are still needed, or need to be amended to reflect new knowledge or

lessons learned from enforcing regulations.

The CDSR also stressed the importance of consulting with Canadians. In addition to the formal pre-consultation on regulations by way of pre-publication in the Canada Gazette, Part 1, there's an expectation that regulators will carry out early consultation with effected stakeholders where appropriate.

Finally, the CDSR emphasized that regulators should consider a variety of approaches to meet regulatory objectives; this is the so-called instrument choice question.

The CNSC has been guided by these key principles as we've established the regulatory framework program to respond to the CNSC strategic objectives of clarity of requirements and communications. This past year we have successfully integrated the various regulatory framework initiatives into a comprehensive program.

This ensures a whole CNSC approach to setting regulatory framework priorities and requirements. Governance is strong. Oversight of the program is provided by the regulatory framework steering committee, and the program received strategic direction from senior management at the CNSC, and we report to management on a quarterly basis.

Not only has the program been recast to encompass all regulatory framework activities from policy analysis to publication of regulations and documents, the planning horizon has been extended to ensure we're capturing future reviews of regulations and documents into our planning.

We have also implemented measures to strengthen stakeholder engagement. The use of discussion papers, and you are familiar with some of those, to solicit feedback on key issues is an example.

One of the newer practices we've put in place is a constructive challenge when new proposals come to the regulatory framework steering committee. Needs and priorities are assessed. Alternatives to making regulations or setting out CNSC requirements by way of regulatory documents are also considered. The focus is on getting the right tool to meet the need at hand.

Overall, the program that CNSC now has in place puts us in a good position to respond to changing regulatory needs, as new issues arise, as industries' needs change, and as the government moves forward with their regulatory reform initiatives.

I'll now turn the presentation over to Colin Moses.

MR. MOSES: Thank you. So as shown in the

diagram on this slide, the CNSC's regulatory framework is governed by the *Nuclear Safety and Control Act*, which gives us the statutory authority to establish a regulatory framework.

The CNSC establishes legally binding requirements, providing the high level requirements and regulations, and supplementing them with detailed requirements and licences which in turn reference other regulatory documents or standards.

The CNSC also issues guidance that outline our regulatory expectations for house licensees should meet these requirements. The regulatory framework program manages the processes and activities for the development of regulatory expectations; that is, the requirements or guidance we issue in regulations and/or regulatory documents.

I should also note that although guidance is not legally binding the CNSC has a clear expectation that licensees consider our guidance in developing their programs and that they meet this guidance to the extent practicable.

When alternate ways to meet requirements are proposed there's an expectation that licensees demonstrate how their proposal is equivalent to the guidance provided by the CNSC.

As mentioned by Mr. Dallaire, the CNSC has implemented a lifecycle approach to managing to regulatory framework. This process takes us from identification of a new issue analysis of how best to address the issue in a regulatory framework and development and implementation of regulatory expectations. We've also implemented regular review of our expectations to ensure that they remain current.

The Commission Tribunal overseas the work of the CNSC staff through each phase of this lifecycle, staff involve the Commission in early policy discussions on new approaches, irregulatory amendments in advance of publishing discussion papers.

In addition, the Commission approves all regulatory documents that purport to impose new requirements and issue licence amendments to reference new documents as appropriate.

Finally when documents are revised, staff will propose revisions to any existing requirements to the Commission for approval. Regulations are also managed according to this lifecycle and the Commission has authority for making regulations under the *Nuclear Safety and Control Act* working through the government's regulation making process.

In order to ensure that the Commission is

kept abreast of our progress, of our activity related to regulatory framework, CNSC staff provide annual updates to the Commission such as the one we are here presenting today, to ensure the Commission members are kept abreast of our work and to modernize our framework.

Similarly, our processes ensure that our stakeholders are engaged at each stage of the lifecycle. We've recently implemented the use of discussion papers which now allow us to consult early with stakeholders as we develop newer different regulatory approaches or considering amendments to our regulations.

This informs our work as we move from regulatory policy analysis to the development of regulatory expectations. Once we have developed our expectations, we again consult with stakeholders to ensure that these expectations are clear and to identify areas where we may need to further refine them. Following consultations, CNSC staff post all comments received to allow stakeholders an opportunity to review an provide feedback on these comments.

And finally as we prepare to publish our expectations, we provide final drafts and dispositions of comments received to the stakeholders who participate in our consultations in order to allow them to consider and under standard dispositions.

All consultations are posted on our website and sent to stakeholders through our subscription service that now includes over 1600 subscribers, including representatives from all stakeholder groups, licensees, non-governmental organizations including over 90 media outlets.

Finally, we have also began using the Government of Canada consulting with Canadians service to ensure that our consultations reach the broadest audience possible.

CNSC staff have recently completed a project to organize the regulatory framework library and have developed a sustainable regulatory framework structure which you see on this slide.

This structure present all existing documents and document projects in clear and logical manner according to industry sectors which provides the guidance to licensees and applicants directing them to the relevant expectations in other documents; safety and control areas which provide requirements in guidance in these technical areas and other regulatory areas which include our guidance and information to address the full landscape of our regulatory activities.

This structure brings consistency to our framework with our current regulation licence, licence

condition handbook and Commission member documents. And it provides us with a global view of our regulatory framework in order to inform our future priorities.

Established in 2010, CNSC staff have been developing the regulatory framework according to the regulatory framework plan. This plan is maintained evergreen and is overseen by the regulatory framework steering committee.

The regulatory framework plan has allowed staff to ensure work continues to reflect organizational priorities and has resulted in improvements to our processes and timelines in a systematic approach to our regulatory framework work. The current version of the regulatory framework plan which now looks out to fiscal year 2017-18 and has been organized according to the regulatory framework structure has been included with this CMD for this update.

In fiscal year 2011-2012, we have addressed key gaps and continue to modernize the CNSC’s regulatory framework. We have developed application guides for virtually all nuclear substance in Class 2 licensees which completed the project to finalize and publish licence application guidance for these licensees and represent a consolidation of over 10 guides and to concise licence application guides.

In addition, expectations were developed for potential new reactors with a focus on small reactor facilities which is an area where you're seeing increasing interest from the power production sector. We have also published requirements and guidance for existing reactors, including for aging management programs to ensure that the existing facilities maintain programs to monitor and address aging of critical system structures and components.

In addition, the CNSC has published documents relating to engagement and communication including providing guidance to licensees and applicants for early aboriginal consultation and to licensees, applicants and intervenors for writing CMDs as well as providing expectations for licensees public information programs and public disclosure. Further, following early consultation through a discussion paper, the CNSC just recently published expectations for the management of uranium mine waste and mill tailings.

Finally, the CNSC is currently consulting on two discussion papers relating to environmental protection which present or propose approaches to ensuring the protection of groundwater and for establishing release limits and action levels at nuclear facilities.

The regulatory framework plan continues to

be challenging over the next fiscal year. We expect to complete a project to update a number of existing documents in response to the findings of the Fukushima taskforce and in addition, the CNSC will be finalizing guidance for new and existing facilities as well as supplementing existing requirements with additional guidance.

Above and beyond these projects, we expect to have a number of initiatives underway to respond to government direction of regulatory reform as well as continuing to modernize our framework through continuing the review and revision if necessary of older documents in our framework.

Finally, having focused on developing and modernizing the framework over the past two years and using the recently developed regulatory framework structure, the CNSC staff will be undertaking a review of our whole framework to ensure that we have appropriate coverage of each of the sections in our framework which we expect to inform our future years work.

I now turn it over to Mr. Dallaire to conclude the presentation.

MR. DALLAIRE: So, in conclusion CNSC continues to manage our regulatory framework in order to ensure clear regulatory requirements and guidance for our

stakeholders, licensees and applicants.

We have established a robust sustainable regulatory framework program which ensures continued focus on the predictability and transparency of our regulatory framework initiative.

That concludes our presentation and we would be glad to answer any questions you might have.

THE CHAIRMAN: Thank you.

Okay. Let's jump right into it. Monsieur Harvey?

MEMBRE HARVEY: Merci monsieur le président.

Well first I want to express my appreciation to the work done. We are in a position here by the number of documents that are brought in front of the Commission that there has been considerable efforts to do this job.

I hope the result may be -- because there has to be a result somewhere -- the result would be in line with these efforts. And I'm wondering, that will be the essence of my first question, if you have any feedback from the industry from the licensees, some reaction about that exercise, their feeling, their perception and their comments? You have anything to ---

MR. DALLAIRE: Just for clarity, Monsieur Harvey, feedback on specific documents that we have

published or have released for public comment or more general feedback on the program?

MEMBER HARVEY: Well, more general, I think we are not doing that for nothing, I mean there has to be some results somewhere. And I presume in the industry, it would be easier for the industry to get our messages and think like that. But I'm just wondering do you have any reaction of feedback from those people?

MR. DALLAIRE: Yes we do. I am the CANSC representative on the Canadian Standard Association, Nuclear Strategic Steering Committee. I have taken the opportunity at the semi-annual meetings to provide that committee with updates on our planning, the projects that we have on our plan at the time of those updates and have kept them informed of our longer term vision.

We have shared this information; it has always received very positive feedback from industry. They appreciate knowing the scope of what we're doing; they appreciate knowing having some advance knowledge of certain of our projects, when they might be made available for public comment, when they might be published.

So it's always been very positive. And, in fact, there's now an expectation that I will continue with these regular updates.

We've also heard that -- because of the

number of documents that we are putting forward, and the discussion papers, that industry is marshalling its resources to try and work together to be able to provide us with comments.

So they are paying attention, they are appreciative of what we're doing, and they do appreciate knowing the longer term vision for this program. Yes, it's very positive.

MEMBER HARVEY: The second question is about the priorities. How do you put priorities?

Quite often, they need to modify the regulation, change something. Those needs come from the sectorial staff, or for licensees, and so how does it work? How do you work together, and how are established the priority?

Because we've got many pages here of what will be done in the future. So how is it established? I know there is some committee, some structure, but simply presented, does it ---

MR. DALLAIRE: I can certainly provide you with some background on that.

In June of last year the CNSC completed an audit of the regulatory framework program. One of the areas for improvement that was identified was to have some clearly documented criteria for selecting priorities for

this program.

CNSC staff did work over the course of the fall, and we did establish a set of criteria.

I don't have the questions -- the details, with me today, so I'd be reticent to speak off the cuff, but they break down into two key areas. One is, how important is a project to meeting the regulatory needs, and how urgent is it?

So when do we need to have greater clarity on a specific issue? Both questions are important.

Once we decide on the importance and the urgency, then our next challenge is to ask ourselves, do we have the resources internally to proceed? That helps us to decide whether we need to shift resources.

So we do have a formal agreed-upon process that has been vetted by the regulatory framework steering committee and approved by management committee. So it is in place and we would be glad to share that with you, with the Commission members, if you wish.

THE CHAIRMAN: I'd like to add, the one thing that this framework is sort of new, is that we make sure we put all our documentation, all of them, over five years.

So you have a priority-setting exercise, yes, but over five years, each and every one of them has

to be reviewed once?

So it may not be a very in-depth review, but at least there will be somebody saying, “Okay, we took a look at this, this is -- the time has come for it”, and you’re always in a cycle of five years?

Which by the way determines also how many documents you can handle over five years. Because one of the issues that we were facing was, we had many, many issues, many, many documents that were in draft form for years.

My favourite one was the one -- and it will go nameless, it was 10 years, with a big “DRAFT” on it. All the industry was using it as the Bible, but it was still “draft” because it we couldn’t close it internally.

So there’s also the discipline, hopefully, that on an annual basis you will review this plan, to make sure that all 38 areas, at least on a five-year cycle, they’ll all -- all of them will be looked at, at last once.

MEMBER HARVEY: The importance is the team working on that project, how many employees, staff, are working on that project, I mean in general?

MR. DALLAIRE: How many CNSC employees ---

MEMBER HARVEY: Yes.

MR. DALLAIRE: --- are actively involved in

developing ---

MEMBER HARVEY: Directly involved.

MR. DALLAIRE: --- regulatory documents?

MEMBER HARVEY: Yes.

MR. DALLAIRE: Within my directorate, we have approximately 10 involved in the development of regulations and regulatory documents.

We have another six to eight who are involved in more of the policy side, and the Government of Canada's regulatory reform agenda. So that's within my directorate.

Elsewhere across the organization, we draw upon subject matter experts for every project. I'd only be hazarding a guess, but I suspect it's somewhere in the order of four to five individuals for every project.

MEMBER HARVEY: Okay.

Is all that paid by the -- it's outside the cost of recovery, so ---

No? It's cost recovery?

No problem, so we will continue.

(Laughter/Rires)

THE CHAIRMAN: A big, big problem -- they annually require accountability on this, so they are ---

MEMBER HARVEY: No, that's your problem.

(Laughter/Rires)

MEMBER HARVEY: Just a last question, on page 2 of your document, the one considering amendments to regulation of creating new regulation proposing regulatory oversight in an area, et cetera, et cetera.

Sorry; proposing regulatory oversight in an area where the CNSC has not previously exercised its authority.

Could you -- is there many areas like this, that it's under our authority, but we never exercised this authority? Is there many areas and in the future how many will come in front of us in the coming months?

MR. LEE: Kevin Lee, for the record.

A good example of an area where we hadn't previously exercised our authority, but intend to, would be financial guarantees.

We had exemptions and we had certain areas within Class II licences where we did not exercise financial guarantees.

Since we intend on doing so, we developed a discussion paper notifying and giving intent to do so, and we received good feedback from industry, from stakeholders, and we will be proceeding, but we will proceed with a different model, slightly. So, that would be an example of an area.

As situations come up, then we will be

exploring it. If, let's for instance say, we were to expand cost recovery, that might be an area where we might look at doing a discussion paper.

MEMBER HARVEY: Okay. Merci, monsieur le président.

THE CHAIRMAN: Thank you.

Dr. McDill?

MEMBER McDILL: Thank you.

Does Cabinet have a checkmark besides CNSC now? These are Cabinet directives on streamlining regulations. I mean, do we feedback to Cabinet, and let them know that it's in place?

MR. DALLAIRE: No, that, Dr. McDill, is not the expectation. The Cabinet directive on streamlining regulation, doesn't require reporting to the government.

All of the existing mechanisms for reporting that the CNSC uses, annual reports, that all stays in place.

But what the Cabinet directive sets out are high-level policy expectations of the government, of all regulators on how it's going to carry out government business in regulating their industries, and including specifically how -- the expectations -- when we plan to make regulations.

But there's no requirement to report on

that to the government; it's only through our normal reporting mechanisms.

MEMBER McDILL: Thank you. That's the first question.

Second question, your conclusion is that as the government moves forward with regulatory reform initiatives, the CNSC is well-positioned, et cetera.

So what's the real issue going forward from here? Is there an issue? Is there a challenge? Maybe I'll rephrase it.

MR. DALLAIRE: I would prefer to reserve my comment on the specifics because some of that may come forward in the context of upcoming announcements around the budget.

MEMBER McDILL: My last question ---

THE CHAIRMAN: But -- there is a "but" here. You did mention the one for one. Maybe they deserve a little explanation because that will be a challenge along the lines that Dr. McDill may be interested in.

MR. DALLAIRE: Yes, and again, it's Mark Dallaire, for the record.

Yes, the one-for-one rule was announced by the government last year as a policy direction. We are waiting for clear direction from Treasury Board

Secretariat, who's responsible for regulatory affairs matters, on how to implement the one-for-one rule. But the decision to go in that direction has been made by the government.

THE CHAIRMAN: Let me just add some colour here. You remember there was a task force that was headed by monsieur Maxime Bernier and it was to deal with the administrative burden on small and medium size organization, try to reduce the administrative burden that is claimed that is continuously increasing and put more and more cost on small businesses.

And they've done a youth study and they come up with a lot of recommendation and the one that really is causing a lot of angst is for every new regulation you're going to propose you'll have to remove one regulation.

So for a regulatory agency like us, that could cause some issues, particularly if you deal with safety issues, et cetera.

So Treasury Board is now trying to make sure that we understand it is to deal with administrative burden when there is an increase in administrative burden.

And there is maybe in some new programs in the budgets that will come to many, many organizations and remains to be seen how you can actually implement them

using this particular rule.

So just as a tongue-in-cheek, I'm saving all our old regs just in case I have to offer them for the new regs.

MEMBER McDILL: Thank you.

My last question is what is the significance of the tetrahedron on the front page and in the bottom right-hand corner?

I can see that is the second year materials exam where you calculate the size of the tetrahedron interstitial site but is there some significance to that, you know, neutrons, electrons, or is it just a nice picture of a tetrahedron?

MR. DALLAIRE: Mark Dallaire, for the record.

And this is hopefully a humorous comment.

MEMBER McDILL: Some tongue-in-cheek here.

MR. DALLAIRE: What are we are trying to get at with this is we have a regulatory framework, we have licensing, we have compliance, all are deemed to be core areas for the CNSC, but they are all connected in the regulatory framework. That is ---

MEMBER McDILL: Ah, so these are commitment, capacity, clarity and communication?

MR. DALLAIRE: No, those are ---

MEMBER McDILL: Darn.

(LAUGHTER/RIRES)

MR. DALLAIRE: Okay, I am going to take Mr. Moses' suggestion that he field the question.

(LAUGHTER/RIRES)

MR. MOSES: So Colin Moses, for the record.

As I'm sure you're aware, we have a president who is very interested in communications and clear and quality products and I think this image just -- it sends a signal of a strong regulatory framework but is purely graphical.

MEMBER McDILL: I think you should go for commitment, capacity, clarity and communication, but that's okay.

Thank you.

I just wondered if there was some significance because it appears on every page. Thanks.

THE CHAIRMAN: As you can see, there is always different in taste in art.

(LAUGHTER/RIRES)

MR. DALLAIRE: If I might comment. This is actually a representation that I wrestled with many years ago because as I think of the key groups of stakeholders within the nuclear industry, there's a public, there's government, there are -- there's industry and there's a

regulator. We are all bound into one system. And this is something that I played with and internally within RPD it's -- we use this to keep reminding ourselves of that connectedness between these various stakeholder groups.

THE CHAIRMAN: I think the message you get that to some science-based organization view this as a molecule of something and therefore they're always wondering what molecule are you talking about here.

So, anyhow, moving on to Ms. Velshi.

MEMBER VELSHI: Thank you Mr. President.

In your presentation, you spent a fair bit of time to talk about your consultation process early on prior to introducing any regulations. Does your process also include formal post-implementation reviews of regulations?

MR. DALLAIRE: Mark Dallaire, for the record.

Yes, this is part of the cyclic review of any set of regulations. As we mentioned in our presentation, our plan is to review every five years. Sometimes we have to review regulations more frequently. Sometimes we do an internal review and we decide that we don't need to.

But we do look at the effectiveness of the regulations; do we need to amend them to make them

clearer; do we still need certain regulatory requirements; can they be -- can certain regulations be repealed or relaxed without sacrificing health and safety and environmental protection.

So when we make decisions about amending regulations, we do consult primarily through publication into Canada because that's part one.

MEMBER VELSHI: So just going further on that -- like would you have a formal process? And, you know, even as you're trying to come up with the question asked earlier on, on how do you prioritize which regulations you're going to go ahead with, is feedback from the stakeholders, whether it's the administrative burden, or whatever it is, would those criteria be laid out and do you get those assessed so that this particular regulation gets a score of eight and this gets a six so this one's got higher priority? Is it as formal as that?

MR. DALLAIRE: Mark Dallaire, for the record.

Yes, the criteria that we've established, for any of our regulatory framework is structured around that. It is what is the significance; will it have a high impact on licensees if we -- or a high impact, a medium level impact or an insignificant impact on licensees if we are to address a certain issue in regulation.

So we do have that type of formality. There is a scoring system on setting priorities.

I'm not sure if I've answered your question.

MEMBER VELSHI: Okay. So, you know, for a project, you've got certain objectives; after you implement the project, you go back and assess how well did we meet these objectives? And presumably the same thing happens with each regulation.

You start off with, and here are our objectives. A year, two years, maybe three years after implementation, do you then go and revisit those and say did this regulation hit the mark?

MR. DALLAIRE: Mark Dallaire, for the record.

Yes, that is done. The feedback we get is primarily through our operations side who have to deal with those regulations and those documents on a day-to-day basis. They have to deal with the imperfections, if you will, in articulating our regulatory requirements. They also receive the feedback from licensees on whether what we have in place is working or not.

An example of this is feedback that our power reactor staff received on one of our reporting documents, S99. It was only in place for a few years but

after a couple of years of experience, there were comments, feedback from industry that said, you know, “We need to take a slightly different approach.”

And so we have been working towards a solution based on that feedback.

THE CHAIRMAN: We’ve also been encouraging very strongly the stakeholder to point back if there’s any particular aspect of a regulation that can be done differently or not working or revised to -- right away point this out to us so it starts a process internally.

MEMBER VELSHI: I know you were a little reluctant in discussing challenges going forward with somewhat uncertainty on what’s coming out in the budget today. But if we were to look at your accomplishments of 2011, very significant accomplishments of 2011, how would they have compared with your plan for 2011?

MR. DALLAIRE: Mark Dallaire, for the record.

So we’ve been quite clear with management committee and I believe with the Commission. Our plan has been ambitious.

We started the fiscal year 2011-12 with a target of somewhere in the order of 28 individual projects. Now those projects are not all of the same nature. Some are amendments to existing documents; some

are new documents that need to be published.

We did have some discussion papers which are, because there's a lot of back and forth on the policy side, are more challenging. But we had about 28 projects. Right now at this point two days from the end of the fiscal year we're slightly better than 50 percent in meeting that target.

But having said that it's an ambitious plan. Over the course of the last two years we have produced and completed more projects than at any previous time in the organization's recent experience.

We're constantly looking for ways to improve our productivity but some projects simply are more challenging than we expect.

MEMBER VELSHI: Thank you. You mention about working with other regulators as you come up with these regulations. What about international harmonization and you say, you now, you talked about working with other Canadian regulators, but what about any efforts at international harmonization and working with other nuclear regulators? If you can comment on that, please.

MR. MOSES: Colin Moses for the record.

In developing our regulatory documents and our regulations we always do a review of what's available out there and adopt to the extent practical, either

domestic or international standards. So we do often make reference and incorporate such standards.

We are -- CNSC staff are also actively participating in activities of the International Atomic Energy Agency who develop a suite of requirements and guidance stock and it's for use of international regulators. So we're very sensitive to the work that's being done over there. And to the extent practical to incorporate generally industry consensus on expectations into our regulatory documents.

MEMBER VELSHI: Thank you. And one final small question. I was looking at slide number 10 and yesterday we had a briefing on the IAEI's IRRS follow-up, and I was looking for PSR, so all these acronyms, but where would that fit in this framework? The probabilistic safety review.

MR. MOSES: Colin Moses for the record. So periodic safety review is involved in the operation of the facility.

MEMBER VELSHI: Okay.

MR. MOSES: So like that would fall under what I believe on the slide is section 1.1.3.

MEMBER VELSHI: 1.3? Okay. Thank you. Thank you Mr. President.

THE CHAIRMAN: Thank you Mrs. Velshi.

MR. MOSES: If I can add I think the CNSC staff will be making a proposal for a periodic safety review, so I should clarify that if ultimately we were to find a way into developing a regulatory document ---

THE CHAIRMAN: No, it was yesterday in the IRRS it was told to us that it will come to us very soon.

Monsieur Tolgyesi?

MEMBRE TOLGYESI: Merci monsieur le président.

C'est quoi le nombre de documents réglementaires qui est géré par la Commission? Cent (100), 200,000?

M. MOSES: Je le sais pas. J'espère pas 200,000. Colin Moses pour les besoins de la transcription.

Actuellement, on a 82 documents publiés. Une des choses qu'on espère avoir avec la structure qu'on a établie, c'est une opportunité de consolider, de minimiser l'agrandissement de notre cadre de réglementation.

MEMBRE TOLGYESI: C'est parce que je regardais, il y en a 70 qui sont là là, dont 15 nouveaux. Ça veut dire que 55 sur les actuels qui sont révisés.

Je trouve 55 actuels sur 82; c'est toute une révision ça. C'est une révision majeure ça de tout le

système, tu sais. Et on le fait en 2012-2013 peut-être 2014. Après on ira en vacances avec tout ce monde-là?

(LAUGHTER/RIRES)

M. MOSES: Le cycle devrait recommencer ---

MEMBRE TOLGYESI: Recommencer -- il y en a 15 nouveaux. Si j'écoute monsieur le président qui dit que pour chaque nouveau, il faut fermer un ancien. Il y en a 15 à fermer sur ---

M. MOSES: C'est pas la même chose.

LE PRÉSIDENT: Posez la question au staff.

M. MOSES: Oui. Colin Moses pour les besoins de la transcription.

Pour répondre à sa question, la règle un pour un, ça va s'appliquer uniquement aux règlements dont on a 12 règlements.

MEMBRE TOLGYESI: Ce que je trouve, c'est un immense travail. Est-ce qu'il y a le besoin là, l'industrie a besoin ou nous, on sent qu'on a besoin de revoir, mettre à jour?

M. MOSES: Excusez?

LE PRÉSIDENT: Posez la question?

MEMBRE TOLGYESI: C'est à vous que je dois poser la question.

M. MOSES: Si vous me permettez monsieur le président, Colin Moses.

Une grosse priorité de l'organisation dernièrement comme on fait mention, c'est la clarité de nos expectations, puis pour ce faire, on produit des documents qui soulignent nos attentes, nos exigences et nos attentes pour certains domaines.

Puis avec cela, ça vient -- c'est vrai, ça vient plus de documents, mais ça veut pas nécessairement dire que c'est plus d'attente; c'est juste pour énoncer nos attentes plus clairement dans le cas de réglementation.

Fait que ça se peut ça va augmenter le numéro des documents. Mais comme j'avais mentionné avec le projet puis avec la structure qu'on a établie, ça va nous permettre de regarder puis vraiment faire analyse de si on a besoin de ces attentes, puis comment on peut les intégrer dans les documents existants.

MEMBRE TOLGYESI: Quand je regarde l'industrie ce qu'elle regarde -- l'industrie, est-ce qu'elle regarde si il y a une réglementation claire, stable, prévisible? Si on le revoit, comme on a parlé, à tous les deux ans, je trouve qu'il manque un peu de stabilité.

Alors, est-ce que vous prévoyez qu'il y a des problématiques éventuellement de l'implantation de tous ces changements-là et de la compréhension par

l’industrie de tous ces changements?

M. MOSES: Colin Moses pour les besoins de la transcription.

Comme vous pouvez voir sur le plan, dans la structure, il y a toute une nouvelle section qu’on appelle « les secteurs de l’industrie ». Ça, c’est un domaine qu’on avait pas trop d’exigences puis la concentration principe là-dessus, c’est pour développer des guides d’application qu’on n’avait pas en place avant. Fait que c’est sûr que ça va agrandir notre numéro.

Mais on énonce plus clairement nos attentes pour les applications qu’on avait juste des exigences de haut niveau dans les règlements. Fait que je pense que ça va aider pour la clarité pour les appliquants puis les titulaires.

MEMBRE TOLGYESI: Donc, vous prévoyez que les utilisateurs comme tels ou ceux qui sont réglementés, ils vont l’accueillir bien parce que ça donne la clarté, ça donne la facilité de compréhension?

M. MOSES: Effectivement, oui.

LE PRÉSIDENT: Pas de documents, et ça, c’est une réponse à des questions de l’industrie de réutiliser. C’est pas une question pour rien.

MEMBRE TOLGYESI: Bien, c’était ça ma principale préoccupation, s’assurer que -- parce qu’il y

en a -- il y en a dans certaines agences où on gère -- on implante les documents.

LE PRÉSIDENT: Mais on a besoin de documents différents pour les isotopes, la production des isotopes pour les mines, pour les productions, pour l'environnement, pour la santé et pour la sécurité. Alors c'est déjà des choses spécifiquement pour répondre des questions.

MEMBRE TOLGYESI: Vous avez bien répondu. J'ai pas d'autres questions.

(LAUGHTER/RIRES)

MEMBRE BARRIAULT: Monsieur le président, juste pour dire que, avec l'expérience, et moi, j'ai été longtemps au Ministère de l'environnement et tout ça, il est impératif de revoir certains règlements avec le temps parce que les règlements deviennent -- ou les guides ou tout ça deviennent désuets et il faut les revoir.

Je pense que c'est une bonne chose d'avoir un système en place pour le faire. Parce qu'au Ministère de l'environnement, puis je l'ai déjà mentionné ici, moi j'ai travaillé en -- je dirai pas la date parce que ça fait trop longtemps -- j'ai travaillé en '82 sur la modification du règlement sur la qualité de l'atmosphère. Et il a été modifié l'année dernière. Ça fait que ça pris 20 ans (sic) avant de -- fait que avoir une structure qui

est capable de réagir rapidement, c'est essentiel.

MEMBRE TOLGYESI: J'espère que c'était pas juste pour -- ça prenait tant de temps pour la clarifier?

MEMBRE HARVEY: Non, mais j'ai -- parce que quelqu'un de l'industrie avait parlé; c'était bien que quelqu'un de ---

LE PRÉSIDENT: C'est clair; c'est stable; n'est-ce pas?

Une petite blague ici.

Any other questions? No. Okay, thank you. thank you very much.

This concludes the public meeting of the Commission. Thank you all for your attendance and participation.

--- Adjourned at 1:57 p.m.