

**Canadian Nuclear
Safety Commission**

**Commission canadienne de
sûreté nucléaire**

Public meeting

Réunion publique

April 4th, 2013

Le 4 avril 2013

Hilton Garden Inn
90 22nd Street East
Saskatoon, Saskatchewan

Hilton Garden Inn,
90, 22e rue Est
Saskatoon (Saskatchewan)

Commission Members present

Commissaires présents

Dr. Michael Binder
Dr. Moyra McDill
Mr. Dan Tolgyesi
Dr. Ronald Barriault
Ms. Rumina Velshi

M. Michael Binder
Mme Moyra McDill
M. Dan Tolgyesi
M. Ronald Barriault
Mme Rumina Velshi

Secretary:

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Ms. Kelly McGee

Mme Kelly McGee

General Counsel :

Conseillère générale:

Ms. Lisa Thiele

Mme Lisa Thiele

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Saskatoon, Saskatchewan

--- Upon commencing at 9:44 a.m.

La réunion commence à 9h44

Opening Remarks

MS. MCGEE: Bonjour Mesdames et Messieurs. Bienvenue à la réunion publique de la Commission canadienne de sûreté nucléaire. Mon nom est Kelly McGee. J'aimerais aborder certains aspects touchant le déroulement de la réunion. We have simultaneous translation. Please keep the pace of speech relatively slow so that the translators have a chance of keeping up and communicating to everyone.

Des appareils de traduction sont disponibles à la réception. La version française est au poste 2. The English version is on channel 1. Please identify yourself before speaking so that the transcripts are as complete and clear as possible.

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

I'd also like to note that this proceeding is being video webcasted live and that archives of these proceedings will be available on the CNSC website for a

three month period after the close of the meeting. Please silence your cell phones and other electronic devices.

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

President Binder.

THE CHAIRMAN: Thank you Kelly and good morning and welcome to the meeting of the Canadian Nuclear Safety Commission.

Mon nom est Michael Binder. Je suis le Président de la Commission canadienne de sûreté nucléaire et je vous souhaite la bienvenue. And welcome to all of those who are joining us via webcast.

I would like to begin by introducing the members of the commission that are with us here today. On my right is Dr. Moria McDill and Monsieur Dunhil Tolgyesi. On my left is Ms. Ramina Velshi, and Dr. Ronald Barriault. We've heard from our assistant commission secretary, Ms. Kelly McGee, and we also have with us Ms. Lisa Tile, general counsel to the commission.

MS. MCGEE: The nuclear safety and control act authorizes the Commission to hold meetings for the conduct of its affairs. The purpose of today's meeting is to hear the presentations from CNSC staff and Saskatchewan Research Counsel regarding the progress of the

environmental assessment at the Gunnar closed mine site. Therefore, this is the only item on the agenda today. The approval of the minutes from the February 20th and 21st commission meeting will be presented to the members for their approval at the next scheduled meeting on May 15th and 16th. In addition to the written documents reviewed by the commission members for today's meeting, CNSC staff will have an opportunity to make presentations and commission members will be afforded an opportunity to ask questions on the item before us.

THE CHAIRMAN: Okay, with this information I would like to call for the adoption of the agenda. Do I have concurrence? For the record, the agenda is adopted.

13-M18.A

Adoption of agenda

THE CHAIRMAN: Let's begin with a presentation by the Saskatchewan Research Council as outlined in CMD 13M 19.1 and 19.1A. I understand that Mr. Muldoon will make the presentation. Please proceed, Sir.

3. Status Report

3.1 Saskatchewan Research

**Council: Status report on
Progress of the Environmental
Assessment at the Gunnar Closed
Mine Site, Northern Saskatchewan
And request for exemption**

13-M19.1 / 13-M19.1A

**Oral presentation by the
Saskatchewan Research Council**

MR. MULDOON: Good morning. For the record, my name is Joe Muldoon, I am the Vice-President of Environment at Saskatchewan Research Council.

With me to my right is Dr. Tamara Yankovich who is the project manager for the Gunnar remediation project. My left to Mr. Ian Wilson, the manager of the remediation group at Sask Research Council. To my far right is Hal Sanders and Dr. Gary Delaney, representing the province of Saskatchewan.

The objectives of today's presentation are to request the revocation of commission order 10-1. To provide an update on the activities that have been undertaken since the May 3rd 2012 Canadian Nuclear Safety Commission update meeting. And to request an exemption from the requirement to hold a license to possess manage

and store nuclear substances at the Gunnar site until December 31, 2016, and also to provide an overview of plans and a path forward.

We will start with the 2010 commission order. Due to public safety risks associated with historic buildings and structures on the Gunnar site, on July 23rd 2010, SRC was directed by the CNSC Commission to secure any hazardous substances and materials that had been left in the buildings and to take the buildings and structures down by no later than October 31st 2011 through commission order 10-1. By September 2011, SRC has secured the hazmat and had taken down approximately 84 buildings and structures plus approximately 16,000 lineal feet of utilidor.

In September 2011, the CNSC conducted an inspection of the Gunnar site and confirmed that SRC had completed all required actions in compliance with commission order 10-1. Aerial photos of the Gunnar site taken before and after the demolition work are shown here. Here is another view of the site before and after the 2010, 11, abatement and demolition work. At this time, SRC is requesting that the commission accept that the conditions of the order have been completed and that the commission revoke (sic) order 10-1.

On to the next piece of the Agenda for the

presentation. In 2009, SRC requested a license exemption and at the December 10, 2009 CNSC commission update meeting, SRC was granted an exemption until April 30th 2013. In support of the Gunnar site license, on March 4th 2013, SRC submitted the Gunnar environmental impact statement which addressed comments received from regulatory agencies, project partners, and the public. In addition draft licensing documentation has been prepared and submitted for regulatory review in compliance with the Gunnar protocol that had been established following the May 3rd 2012 CNSC commission update hearing.

As will be described in detail, we are told the timelines leading to the commissions decision to grant a license to remediate the Gunnar legacy site will lead to licensing sometimes late in 2014. To be conservative and to allow for possible delays in the on-going process, SRC is requesting an exemption from the requirements to possess, manage, and store nuclear substances at the Gunnar site until December 31st, 2016. SRC is hopeful that a CNSC license to proceed with remediation on the site will be issued well in advance of this date, and is prepared to move forward as soon as practical with the anticipation of remediation process. In terms of its history, the abandoned Gunnar Site houses a residential area along with a mine and mill comprising an open mill,

and underground workings from which uranium ore was mined and subsequently milled on-site. The site was operated by the now non-existent Gunnar Mining Limited from 1953 to 1964 and it was left as is with no decommissioning. The site is a legacy site.

The Gunnar Mine was operated under different environmental standards than we would expect today. The current environmental state of the site is unacceptable under modern standards and the province has contracted SRC to manage the cleanup of the site.

As a result, SRC has been working closely with project partners, regulatory agencies and Northern communities to identify needs and to remediate the site. Between 2010 and 2011, focus had been placed on the abatement and demolition of buildings and structures on the Gunnar site to address public safety concerns in compliance with Commission Order 10-1. With the successful completion of that work, SRC has been focused on gaining the necessary approvals for the remediation plan through the environmental assessment in parallel with developing licensing documentation for the site.

Immediate site safety is being managed through restricted access and community education. Longer term hazards at Gunnar are being addressed in the context of three project objectives. These are focused on

eliminating or reducing risks to humans and the environment, applying technically and economically feasible approaches to conduct the remediation itself and establishing a cost-effective monitoring program that minimizes long-term care and maintenance at the site which can be very costly due to the remoteness of the site and the fact that it is off the power grid. The Gunnar Remediation Project is funded 100 percent through public funds.

SRC is looking for solutions that minimize the risk of having to undertake any major post-remediation work that would require significant mobilization to a remote northern site. This approach also ensures a true - - a smooth transition into the Institutional Controls Program.

Corresponding project endpoints or desired outcomes of the remediation have been developed as listed here.

The mitigation of the physical and chemical hazards associated with the deteriorated buildings has removed these risks from the site. Moving forward, SRC is developing plans to address the risks associated with the complex interactions of the major site components or site aspects.

Since the Gunnar site is a legacy site, SRC

is not able to move from operation into decommissioning. The site has a number of distinct challenges. The most obvious are three separate tailings areas, the flooded pit and the waste rock piles. The interactions of these site aspects will be continually assessed as each phase of remediation continues.

Site safety and cost effectiveness are both important guiding principles for SRC.

A clear view of the three Gunnar tailings areas can be seen in this photo. Here is a closer view of the waste rock piles and an aerial view of Gunnar pit taken prior to the abatement and demolition of buildings and structures which clearly show the flooded open pit.

I will now turn the next portion of the presentation over to Dr. Tamara Yankovich, Project Manager for the Gunnar Project.

DR. YANKOVICH: Good morning. For the record, my name is Tamara Yankovich.

The ultimate goal of the Saskatchewan Government's intervention at the Gunnar site is to remediate the site and manage it under the Saskatchewan Institutional Control Program. To do this, remediation of the site is being planned using a staged approach consisting of four key stages.

Pre-remediation involves planning and

gaining approvals for remediation plans. Remediation involves the execution of plans in a safe and compliant manner. Post-remediation involves the monitoring and follow-up to demonstrate that the remediation is performing as expected and long-term monitoring is conducted to demonstrate improvement of environmental quality under the Institutional Controls Program.

Active work is underway as part of pre-remediation -- active work, sorry, that is underway as part of pre-remediation can be subdivided into efforts related to gaining approval of the environmental assessment, preparation of documentation for the Gunnar licensing package and detailed engineering to develop the specifications for implementation during the remediation phase.

It is anticipated that both the environmental assessment and licensing will be completed by the fall of 2014 pending approval of the environmental impact statement by responsible authorities and a licensing decision by the Commission.

A summary of the key work that was done in support of the safe management of the Gunnar site during the 2013 work season is presented here.

Today we will present information on the Gunnar environmental assessment, ongoing site monitoring

results and plans for site monitoring and maintenance between now and the beginning of remediation at the site.

Since the last meeting, while managing and maintaining the Gunnar site, SRC has focused most of the resources on completing and submitting the environmental impact statement and the corresponding draft licensing documentation to the responsible authorities.

The progress made on the Gunnar environmental assessment is summarized here. Specifically, SRC submitted the Gunnar environmental impact statement in January 2011. Comments on the environmental assessment were received from responsible authorities in April 2011. The revisions to the text of the EIS were completed in July 2011 and a number of additional field and desktop studies were undertaken at the request of project partners and regulatory agencies.

Results from these studies were documented and presented to responsible authorities for review prior to incorporation into the updated Gunnar environmental impact statement. The revised Gunnar environmental impact statement was submitted on March 4th, 2013. SRC recently received comments from provincial regulatory agencies further -- following their review of the EIS.

Additional 2012 studies are listed here. Since the work at Gunnar is publicly funded, some

information that is typically gathered after environmental assessment approval in support of detailed engineering and licensing has been required up front by funding partners.

The revised Gunnar environmental impact statement was submitted on March 4th, 2013 to responsible authorities. It contained a comprehensive list of feasible remediation options for each of the different site aspects. Since Gunnar is a legacy site and the Gunnar Project is essentially an intervention 50 years after the site was abandoned, our understanding of this site and the interactions between site aspects is still being developed.

The EIS demonstrates that many paths forward exist that will result in improved site safety. Their specific remedial approach will proceed in a stepwise manner through a series of identified decision points. Each point builds on the previous and is based on gradually increasing confidence and more complete information.

The decision tree will be managed through CNSC licensing with hold points. This will allow for the project to proceed where knowledge is adequate and to allow for continuous evaluation and adaptive implementation of options within an accepted safety envelope. For example, the figure here shows a simplified

decision tree diagram for the remediation of a tailings area which will be used as a tool during licensing to select the final remediation option for the tailings.

Initially, a decision will be required to determine whether or not to relocate the tailings. If left in place, based on external gamma dose rates, it will be necessary to determine whether an engineered cover should be placed on the tailings.

Current information, as presented in the Gunnar environmental impact statement, indicates that the tailings should be left in place and that an engineered cover is needed on the tailings.

Next, through detailed engineering and design, it will be necessary to determine what type of cover should be installed on the tailings to shield gamma dose rates and minimize contaminant releases to the Lake Athabasca receiving environment.

SRC continues to maintain close communication with regulatory agencies and project partners to discuss the status and path forward of remediation plans.

In support of the decision tree approach, SRC has established an extensive network of environmental monitoring locations and has also conducted sampling to address targeted questions along key contaminant pathways

and in key receiving environments as shown here. These locations have been selected in consultation with regulatory agencies and project partners as appropriate.

The data generated through routine monitoring at Gunnar will ultimately inform the selection of preferred remedial options for the site during licensing using a decision tree approach. In addition, targeted studies focused on the characterization of contaminant loadings from key source terms including the waste rock, tailings, pit and historic process areas of the site will be used in assessing risk and identifying specific remedial options.

For example, extensive work has been done to assess contaminant concentration in loadings from the Gunnar main tailings through Catchment III towards the waste rock and ultimately into Zeemel Bay and Lake Athabasca as shown here.

Detailed characterization was also conducted during the 2012 work season in the Gunnar tailings areas in support of a site-wide contaminants loading model as well as detailed engineering.

A surface water and groundwater monitoring network was then established to monitor contaminant concentrations and loadings, seasonally through space and time, on and around the Gunnar site.

Samples of the surface water data are shown here for Langley Bay, in the bottom panel on the right, and for the waste rock seepages into Zeemel Bay in the top panel.

In general, in Langley Bay, uranium concentrations, as shown in blue, typically meet both the Saskatchewan Surface Water Quality objective of .015 mg/L and the Gunnar site-specific remedial objective of .09 mg/L; whereas in some cases, Radium 226 activity concentrations, shown in red, can exceed the Saskatchewan Surface Water Quality objective of .11 Bq/L by up to approximately five-fold.

Uranium and radium concentrations can vary seasonally in Langley Bay. By comparison, in the waste rock seepages that enter Zeemel Bay, uranium and radium-226 exceed the Saskatchewan Surface Water Quality objectives of .015 mg/L and .11 Bq/L, respectively, by up to approximately a thousand and a hundredfold.

Radium-226 activity concentrations are fairly consistent seasonally in the waste rock seepage; whereas uranium concentrations seem to change seasonally. Example: potentially due to dilution during the fourchette (phonetic).

In terms of the groundwater, 82 piezometers or groundwater wells were installed in 2012, as shown in

the left-hand panel, and sampling was conducted twice at each location. Groundwater quality was then compared to regulatory guidelines and the spatial distribution of contaminants in Gunner sub-surface waters were assessed.

For example, the right-hand panel shows the spatial distribution of uranium in groundwater on the Gunnar site. Green circles fall below the uranium groundwater quality objective; whereas red circles exceed. Circle size increases with increase in concentration.

Similar diagrams have been produced for radium-226 and other key contaminants. In general, concentrations are elevated in sub-surface waters on historic process footprints, on the waste rock, and in the tailings areas and down gradient.

Surface and groundwater quality data as well as water flow measurements were inputted into a site-wide quantitative contaminants loading model that was developed for the Gunnar site this past year. Over time, monitoring data will continue to be inputted into the model and will be used to inform decisions related to selection of preferred remedial options using a decision tree approach that will be applied during licensing as described earlier.

In support of licensing, SRC has also submitted drafts of many of the required licensing

documents in accordance with the Gunnar protocol. A Radiological Code of Practice has also been drafted and is currently under SRC review.

I will now turn the rest of the presentation over to Mr. Joe Muldoon, Vice President of SRC's Environment Division.

MR. MULDOON: For the record, my name is Joe Muldoon.

Once the environmental assessment is approved and a CNSC licence issued, remediation will be initiated. In the interim, SRC faces a number of challenges. Site safety and security must be maintained, ongoing environmental monitoring is required and communication programs for local communities, including Aboriginal consultation, must be maintained.

Managing the expectations of local communities is an ongoing task. While waiting for the EA and licensing processes to be completed, SRC will focus their efforts on data collection in support of detailed engineering and in support of required information for decision points for remedial options.

This work, in support of the decision tree, will proceed subject to funding for this fiscal year.

Before we end the presentation, I would like to invite CNSC Commission Members for a visit to the

Gunnar site. This will provide an opportunity for the Commission to experience the site and see firsthand the scale and complexity of this public legacy.

In terms of timing, weather conditions are most conducive for a visit between May and mid-September. You really don't want to be up there in February -- January or February.

That concludes our presentation. Thank you.

THE CHAIRMAN: Thank you.

I'd like to turn the floor now to CNSC staff for their presentation, as outlined in CMD 13-M19.

And I understand that Mr. Elder, you're going to make the presentation.

13-M19

**Oral presentation by
CNSC staff**

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

For the record, my name is Peter Elder. I am Director General of the Nuclear Cycle and Facilities Regulation.

With me this morning are Mr. Don Howard,

the Director of our Waste and Decommissioning Division, and Mr. Ron Stenson who is our Senior Project Officer in that division and who is our lead on this file. We also have the rest of our CNSC Licensing Project team.

Before Mr. Stenson will give the update, I'd like to remind them that when we met last -- on this file last year in May, CNSC staff reported that there had been good progress and full compliance with the order, but we had to express concern about the overall pace of the project.

Therefore, we informed the Commission at that time that we would be putting in place administrative protocol with all parties, so that's the regulatory parties and the funding parties, to make sure that there had been timely movement on the issues around moving this project forward.

Since that time, we believe the protocol has been effective in making sure things do -- have moved forward, so we've seen significant and timely progress since September of 2012.

There are two other issues that SRC has requested at this time. One is a formal request to revoke the Commission order now that the work is all complete and another exemption from their requirement to hold the license in possession until the EA is done. CNSC Staff

will comment on these two requests as well as provide our overall view of the current site conditions. So now I'll turn the presentation over to Mr. Stenson.

MR. STENSON: Good morning, Mr. President, and Commission Members. My name is Ron Stenson. I'm Project Officer responsible for managing the licensing and compliance activities associated with the regulation of the legacy Gunnar Uranium Mine and Mill Site. Pardon me, in Northern Saskatchewan.

I'll begin my presentation by providing a brief history of the file. I'll then provide staff's assessment of the completion of the Commission Order 10-1. I'll provide staff's assessment of SRC's request for an exemption followed by a brief status report for the ongoing environmental assessment process. I'll then summarize the status of the Gunnar protocol and discuss staff's view of current site conditions. Finally I'll present staff's conclusions and recommendations.

Regulatory Background: As Presented in detail in SRC's CMD, the Gunnar site began operations in 56 -- 1956 and was abandoned in 1964. When abandoned, the ownership of the site fell to the Province of Saskatchewan and was subject to the laws of the province.

Federal oversight at the site did not begin until the year 2000 when the *Nuclear Safety Control Act*

came into force. A key change in this federal legislation was that it applied to the various levels of government as well as the private sector.

During the early 2000s, CNSC Staff worked with Saskatchewan Environment and Resources Ministry to make the site safer. This included placing signs at access points, physically reducing access to the buildings and informing local residents and businesses of the potential hazards for use of the site.

In 2006 the Provincial Government signed a cost sharing agreement with the Federal Government and named the Saskatchewan Research Council to act as their agent for licensing and remediation of the site. In 2008 SRC submitted a project description and triggered the joint Federal-Provincial EA process.

In 2010 a formal application for a license was submitted by SRC and in 2013 the revised environmental impact statement was submitted. To address the hazards associated with the ongoing deterioration of the 50-year-old buildings on the site, the Commission issued an order to bring down all the structures on the site in 2010. The order was completed by the end of 2011.

Compliance With Order, 2010: During inspections in 2010 it was apparent to CNSC Staff that the signage, barriers and information programs implemented by

the province were not keeping people from entering the buildings in pond site. The obvious deterioration of the buildings and the lack of respect for the controls in place raised safety concerns and SRC was ordered to knock down the structures on the site. SRC's CMD provides the details of the activities under the order.

CNSC staff inspected the progress being made under the order twice in 2011 and physically confirmed the completion of the order in September 2011. CNSC staff has inspected the management of the debris remaining onsite and are satisfied that it is being managed safely.

The remaining HAZMAT on the site is segregated and stored in fenced and signed compounds. The CNSC staff is satisfied that the remaining HAZMAT onsite is being managed safely. CNSC staff anticipates that the remaining HAZMAT will be removed from the site to appropriate disposal at the first available opportunity.

CNSC staff is satisfied that all the conditions contained in Commission Order 10-1 have been completed. CNSC staff recommends that the Commission revoke Order 10-1 as requested by the SRC. CNSC staff will continue to monitor the safety -- site safety to ensure that demolition debris and the remaining HAZMAT onsite is managed safely.

CNSC's Assessment of SRC's Request for an Exemption: SRC has requested an exemption from the requirement to hold a licence to possess, manage and store nuclear substances on the Gunnar site. The site has reviewed the request against the requirements in section 11 of the General Regulations cited here.

CNSC Staff Conclusions: With respect to risk to the environment or the health and safety of persons, the exemption requested essentially allows the site to remain in its current condition until licensing processes can be finalized. The site has -- the Gunnar site has been in its current condition for almost 50 years.

Based on current land uses, the awareness of local residents, the efforts of the Province of Saskatchewan to mitigate hazards and the remoteness of the site, the risk to the health and safety of humans or that of the environment will remain very low for the exemption period being recommended.

CNSC staff concludes that issuing the requested exemption will not increase the risk to the environment or to the health and safety of persons.

With respect to risk to national security, nuclear substances located at the site for which the -- an exemption is being requested are limited to natural

uranium and those nuclear substances that are naturally found in conjunction with uranium. Therefore CNSC staff concludes that the exemption would not pose any risk to national security.

With respect to conformity with international obligations, CNSC staff has examined the licensing exemption recommended here in regards to international obligations for which the CNSC has responsibilities for implementation on behalf of the Government of Canada, namely the IAEA safeguards.

CNSC staff concludes that the exemption recommended herein would not give rise to a situation which would impair Canada's continuing ability to achieve conformity with the international obligations to which Canada has agreed. Therefore CNSC staff recommends that the Commission grant the exemption as requested by the SRC.

As described in detail in SRC's CMD, SRC has met the requirements of the Gunnar protocol and submitted their revised CMD -- pardon me, revised comprehensive study report on March 4th 2013. The anticipated timeline to complete the EA and licensing process is shown here.

To summarize, in March we received the revised EIS submitted by SRC. In June the Federal Reviews

and Draft Comprehensive Study Report should be complete. July to August we have Aboriginal public engagement and by December of 2013, we anticipate submitting the comprehensive study report to the Commission. By spring-summer of 2014 we anticipate the Minister's EA decision and if favourable, then, in the fall of 2014 we anticipate licensing CMD to the Commission. Two thousand and fifteen (2015) would then see SRC mobilizing to the site and in the spring of 2015 remediation work could possibly begin on the site.

We've gone further to suggest that in 2021 we expect that the completion of the anticipated remediation work and the start of the post-remediation monitoring would begin. And sometime in the neighbourhood of 2031 or beyond, we're looking at the CNSC staff returning to the Commission with a suggestion to potentially move the site into institutional control.

During the Commission meeting held on May 2nd, 2012, CNSC Staff informed the Commission that the -- a formal protocol between all key players for this project will ensure that the site is brought under CNSC licence in a timely manner. The protocol for the Gunnar remedial project environmental assessment and licensing activities was developed and signed by SRC, Saskatchewan Ministry of Economy, Natural Resources Canada, Saskatchewan

Environment Environmental Assessment Branch and the CNSC.

The Gunnar protocol details the deliverables, timelines and responsibilities around the completion and review of the EA documentation. As demonstrated by the submission of the EIS by SRC, the EA process is proceeding as planned.

The Gunnar protocol also details the deliverables, timelines and responsibilities around the completion and review of documentation in support of licensing. To date SRC has met their committed deadlines for the submission of all draft documents required under the Gunnar protocol. CNSC has completed its reviews and will be providing feedback to SRC in April.

CNSC staff's assessment of safety at the site has not changed since the last update. There are no immediate health risks for casual access to the site, but SRC is encouraged to maintain signage and ongoing public information programs.

Localized minor contaminant impacts are evident in the two bays immediately adjacent to the waste rock and the tailings. Offsite impacts are minor, but do pose a possible long-term potential hazard to fish populations. No radiologic risks have been identified for terrestrial wildlife and preliminary human health risk assessments of the unremediated site indicate a need for

site remediation.

CNSC staff had met with local communities and First Nations regularly since May 2012, that Commission meeting.

In September 2012, we attended and participated in the EQC meeting in Uranium City. In January of 2013, we attended at a joint SRC-CNSC tour of five northern communities: Stony Rapids, Black Lake First Nations, Fond du Lac First Nations, Uranium City, and Hatchet Lake First Nations.

CNSC staff has also had numerous discussions with local people during inspections, on the phone and through email. CNSC staff will continue to consult with First Nations and the general public as the project continues.

Our conclusions. The SRC has complied with all of the requirements of Order 10-1. The environmental assessment process is progressing. CNSC staff expect that the comprehensive study report will be submitted to the Commission by December, 2013.

CNSC staff will continue to monitor progress in respect of the licensing process, and anticipate coming to the Commission with the next information update and with a request for licensing by the fall of 2014.

The Gunnar site continues to have

incremental, localized impacts on the environment. Site safety has improved markedly, with the removal of many physical hazards under the Order.

CNSC staff conclude that granting the requested exemption, pursuant to Section 7 of the NSCA, meets the requirements of Section 11 of the General Nuclear Safety and Control Regulations.

Staff's recommendations. CNSC staff recommend that the Commission grant SRCs request for the revocation of Order 10-1, and CNSC staff recommend that the Commission grant an exemption from the application of the NSCA in its regulations pursuant to Section 7 of the NSCA for the possession, management, and storage of nuclear substances at the Gunnar site until December 31st, 2016. Thank you.

THE CHAIRMAN: Okay, thank you. So I'd like to open the floor for questions, and starting with Dr. Barriault.

MEMBER BARRIAULT: Thank you, Mr. Chairman.

First of all, I'd like to commend SRC for the work that's been done over the last few years, really. It's been quite a change from what we saw previously.

When I look at Slide 8 of the CNSC, I'm

wondering if that timeline, if SRC could live with that or is that your timeline? So Slide 8 of CNSC.

MR. MULDOON: Joe Muldoon, for the record.

SRC can live with this timeline. Would we like to be able to proceed sooner? I think the answer is yes.

That's always subject to funding. The project must proceed based on funding availability, and two partners, provincial and federal government, are funders.

But would we like to proceed sooner? Of course. We think we can, but that all depends on the decisions we approach -- how the data informs the decisions as we move forward. So we can certainly live with this timeline.

MEMBER BARRIAULT: With this one.

CNSC, is it feasible in your expertise, I guess, to have a shorter timeline as what they're suggesting?

MR. ELDER: Peter Elder, for the record.

We are exploring if there's any way ---

MEMBER BARRIAULT: Of compressing it?

MR. ELDER: --- of compressing that timeline, so we are looking actively to see if we can compress it.

So, yes, we think there are some -- it's premature to say that it will happen, but we are constantly reviewing that timeline, and with the other partners under the protocol to make sure, if there's any acceleration, that it's possible.

MEMBER BARRIAULT: Okay, thanks.

So you mentioned something about budget availability. If the timeline was compressed, would you have availability of budget to do that?

MR. MULDOON: That question I would have to turn over to the Province for them to answer.

MEMBER BARRIAULT: Is it fair to ask the question?

MR. SANDERS: I would offer -- sorry, for the record, it's Hal Sanders, Assistant Deputy Minister with the Ministry of the Economy.

The question has -- is a very difficult one to answer. The site itself is based in a funding agreement from 2006. The costs anticipated at that time were in the neighbourhood of 24 to 25 million.

As you can appreciate, we have now spent \$55 million and we have not gotten to the actual reclamation -- the key reclamation areas.

So far, again, the provincial government has spent all but \$1.1 million of that 55, and it is true

we are beginning to concern ourselves about the prospects of some of our colleagues and their desire to see the site cleaned up sooner.

And one of the challenges is one of scientific information on which to base a decision, and whether or not one party believes there is enough information. It is very easy to ask for more scientific information, it's very difficult to make a decision about a course, and this seems to be the challenge that we have. So we continue to seek and obtain more information about the site, but it then delays actually doing the work.

So at the current time the Province has committed just under \$2 million for the site. We are asking our federal colleagues, as we have for -- actually, more than a year, I believe two or three years -- to talk about this particular issue, and we've been unsuccessful in that.

I would say that the protocol agreement has been very helpful, but what it cannot address is the funding concerns as well as when the parties to the site clean-up decide that there is enough information to make a decision on a path forward. So those are the challenges that we are facing outside of the protocol.

So if I might observe, the request for

2016, even though it is possible to meet those timelines shorter, based on our experience in attempting to get decisions on certain aspects of the site, I would say 2016 is still optimistic from my perspective.

MEMBER BARRIAULT: Thank you.

THE CHAIRMAN: Can I jump into this?

So you -- you're being very diplomatic here. The federal banker here is NRCan? Is that ---

MR. SANDERS: Yes.

THE CHAIRMAN: And is that now the major barriers that are required to go on? I mean, we're looking for the EIS to complete. This is still a paper study.

With all the work that has been done, I felt -- I thought you had enough information to come to the Commission for at least the environmental side.

MR. SANDERS: Again, Hal Sanders, for the record.

From a provincial perspective, we believe that to be the case. So I cannot speak for our federal colleagues, but obviously they have some continuing scientific questions that they would like answered before we likely will be able to move forward.

THE CHAIRMAN: That's been going on for how many -- 15 years? I mean, help me here. And what is

the problem? Are there too many cooks in the protocol?

MR. ELDER: Peter Elder, for the record.

Well, the protocol's has only been there since last September, so I think it's a question that we've been working with everybody to say what needs to be done to at least start the work that is obvious. And then you may need a little more study to do your final elements, so we've been -- that's why we've been pushing and working on this decision tree model to say you don't have to decide everything before you put a shovel in the ground, that you can put the necessary controls in the licence to say -- so we've been doing that and explaining the processes to all parties involved.

Right now, the next decision point is, I think, on that slide that Dr. Barriault was talking about, is the federal comments on the comprehensive -- on that EIS. And under the protocol, there is a timeline, and if there isn't consistent -- if there isn't a consensus it will be raised up inside the various organizations very quickly. So to say ---

THE CHAIRMAN: But it's enough money now to finish the environmental study?

MR. ELDER: The environmental studies, they -- SRC has submitted all their studies to date, and their opinion, and we're confirming that right now, is

that there are no further studies required and that that's sufficient to make a decision on the environmental assessment. So then you would go into the licensing and actual physical work.

So we have the controls and the protocol to make sure that this EIS does not go any further than what's the schedule that we presented.

THE CHAIRMAN: So it's totally in the Federal Court or the regulatory ---

MR. ELDER: There's a joint -- the environmental assessment is a joint between the federal and the provincial, so we're looking at the reviews from both ones, but if there are problems we will know with the data what needs to be done. We will know in the next month or so and, in the protocol, there are mechanisms to raise those issues up inside all the organizations to make sure they get resolved quickly at the appropriate necessary level.

THE CHAIRMAN: So the budget we are talking about is even the budget for completion of the EIES, we have not -- there's nowhere yet a budget for the actual carrying out, whatever remediation require? Do I get this right?

MR. ELDER: Peter Elder for -- I'm not familiar totally with the agreement with the Federal

government in terms what are there -- there are, from my understanding, triggers in the agreement with the Federal Government of when money is released, so ---

THE CHAIRMAN: Can you shed any light, I mean, is that a different process for the actual budget for the remediation?

MR. SANDERS: Hal Sanders for the record.

The agreement itself was entered into in 2006; the total cost for the entire remediation effort was originally budgeted at \$24.6 million. There was a phase - - phase 1, phase 2, phase 3, components to that agreement that spoke to contributions by the province and the federal government where the province would cover certain costs up to a certain point, fed within -- I'm sorry, our federal colleagues would contribute 100 percent on other aspects. When we exceeded the \$24 million, of course since that time the province has been providing the necessary funding to accomplish what is necessary to move the project forward. But there is no amount that is set, in our current accounting practices, for the remediation of the site. That said, I understand that new national standards for the setting up of liabilities for these types of sites will be imposed on institutions such as governments and that by early next year, I believe, we will have set-up what we anticipate to be the liability,

at least from the provincial perspective for the full remediation site, whatever that happens to be through the cost and estimates that are now being developed.

THE CHAIRMAN: Okay. Thank you. Dr. Barriault.

MEMBER BARRIAULT: Just one more question. SRC, are you responsible for any other sites, any other abandoned sites in the Athabasca basin.

MR. MULDOON: Joe Muldoon for the record. We have been contracted by provincial government to look after the clean-up of the Gunner site; there's the Lorado site and there are 36 small satellite sites that we're responsible for the clean-up. It's all part of what's called Project cleans.

MEMBER BARRIAULT: 38 sites altogether, 39. Thank you. Thank you Mr. Chairman.

THE CHAIRMAN: Just to follow-up, yesterday and today, there were questions about in the Beaverlodge area, there were few -- what I'm told some of your clean-up jobs. The question was "are you talking to Cameco on the bigger lodge clean-up"?

MR. MULDOON: Joe Muldoon for the record. Dr. Yankovich can talk in detail about this but yes we are -- we are working with Cameco in developing regional monitoring system or plan for the areas so that

we're not just all out kinda doing it individually, we will be part of that team putting that together. We do -- when we go out and meet with the communities, we often have the meetings again when we bring the communities together, we want to find efficiencies so we will present, on our work, at the same time that Cameco will present on theirs. We meet with the regulators in the same fashion in terms of putting together a regional plan. So the answer is yes.

THE CHAIRMAN: Okay, thank you. Ms. Velshi.

MEMBER VELSHI: Thank you Mr. President. So, first question, I don't know whether it's for the province or for SRC. When do you expect to get a budget, not an approved budget, but what the cost of the remediation and long-term monitoring's gonna be? Where in the project life does that come about?

MR. MULDOON: Joe Muldoon for the record. I can start -- start the discussion here or the answer. Once we -- DIA -- the documents have been submitted as was presented through a decision-free process so there's certain pieces that we haven't reached conclusion on yet, but we've done enough -- there's been enough studies done, from our perspective, to be able to ascertain the impacts, therefore to reach any decision.

Once we can proceed to do detailed engineering, for instance on the tailings we're looking at the potential to that in this -- this year, this fiscal year. Once we get to that level where we have the detailed costing, part of that is also the detailed costing, we will then be in a position to be able to estimate exactly what the cost or -- we, right now, we would have what's class D estimates now on the project but there still -- they still need to be tightened.

MEMBER VELSHI: But it's within this year though that you think you'll have your more detailed estimate?

MR. MULDOON: That would -- no, that would only be for one aspect. This year, if we do are able to process with the one piece, that would be for the tailings. There's the other site aspects, the waste rock, and some of those - some of those different areas - that we will not have estimates on that and will not be able to reach estimates on that until we've basically worked our way the EA approval and the conclusion of the protocol.

MEMBER VELSHI: So I'm trying to understand the request for an extension, the fact that you may be doing the remediation in phases. The timeline provided that, we just looked at on page 8 shows that mobilization could be -- or licensing could be fall of 2014. So is --

does the 2016 give you just a lot of cushion then to make sure that that exemption -- that you're not coming back for an extension because what's heard from the province is they think even the 2016 may be a bit too optimistic. I'm trying to understand what's the confidence level that remediation actually start prior to that.

MR. MULDOON: Joe Muldoon for the record.

There's a couple of reasons for that. One, of course, is based on the decision -- there's always more information that we can gather and because it's a legacy site, we want to make sure that we have built a cushion in, in terms of making sure we have the right information to make the right decisions, the most cost effective decisions.

The site is a very remote, you can only access, get equipment in, for this kind of work, really by winter road. So that, automatically, if we don't get a decision, say very early in the fall of a certain year, we really can't start that project until the following year. So, that has impact -- so the mobilization is very much a key issue. And then, the whole funding, the federal-provincial partners side and the even the regulatory review, federal-provincial, is extremely complex and it has -- the history, so far, has been that what we thought -- timelines that we thought were more reasonable -- we've

had -- well, there's been challenges in terms of meeting those timelines. So, rather than to come back again, we wanted to make sure we had it covered with this extension.

MEMBER VELSHI: Thank you. On the question of end-points or that, I think you have a slide on that, when you transfer the property, you plan to transfer it under the institutional control program, and you did show us slides that currently places where you're gonna be a better above whatever standards they are for ground water and surface water, is your end point for transferring those site that they be below those standards or that there'd be some sites that you simply will not be able to get within the Saskatchewan service quality objectives?

MR. MULDOON: Joe Muldoon for the record.

What we've done as part of the EA documentation is we have set gamma levels based on background, that's existing background, so we have very specific targets that we are setting and the same would apply to contaminant levels and we've set levels -- maybe I -- what I should do is turn this over to Dr. Yankovich, she can speak more in terms of surface water quality side. I believe that there are some areas where we will not necessarily meet the sub-surface water quality objectives, but we will be very close.

MS. YANKOVICH: This is Tamara Yankovich,

for the record.

SRC, over the past year, has developed risk-based, site-specific remedial objectives in receiving waters downstream of the waste rock and the tailings areas. These are the key sources of contamination on the site. These are taking account of more realistic toxicity data that is available and using the Canadian Council of Ministers of the Environment approach.

As we go forward, we're going to continue - - and we collect more monitoring data, we're going to input it into the site-wide quantitative model that has been developed for the Gunnar site and then, we'll probably end up needing to do site-specific, risk-based assessments in the downgrading environment to determine the magnitude of any exceedances that may occur and also things like the size of the footprint that is impacted and to do an evaluation of the significance of effect.

And so that's something that will evolve over the course of the decision tree approach.

MEMBER VELSHI: Thank you. A minor point in your CMD, the written submission, on page 8, there is a mention of being in compliance with United Nations standards for -- I don't know, it was for transportation or storage. See if you turn over to that, it's the third paragraph. And I was just wondering why UN standards and

not Canadian standards or IAEA requirements? It's on page 8 of CMD 13-M19.1.

MS. YANKOVICH: This is Tamara Yankovich, for the record.

That sentence is referring to the way in which the hazardous materials are being labelled and packaged on the Gunnar site. SRC is complying with regulatory standards nationally and internationally in handling materials on the site.

MEMBER VELSHI: Okay. So, we do ---

MR. ELDER: Peter Elder, for the record.

Again, these are hazardous substances, not radiological substances, so the UN is equivalent to the IAEA in this area and they would be like the IAEA ones; the Canadian standards are -- meet those international ones as well.

MEMBER VELSHI: Thank you.

THE CHAIRMAN: But they do fall under the Transport Canada hazard legislation; right?

MEMBER VELSHI: A couple of very quick ones. You mentioned about your work with Cameco on a number of different fronts, but it was monitoring or public information sessions. Do you share best practices with them? You know, we've heard over the last couple of days about their modelling and how they expect things to

unfold. I just wondered whether you did that as well.

MS. YANKOVICH: This is Tamara Yankovich, for the record.

SRC attended Cameco's workshop on their quantitative site model and their cost evaluation. SRC and Cameco and AREVA are in consultation or communication regarding different aspects of how to make use of best practices that are available.

MEMBER VELSHI: Thank you. And my last question is for staff.

There was more confirmation. What does the exemption really mean for regulatory oversight?

MR. ELDER: Peter Elder, for the record.

Basically the exemption is -- there is a -- I guess you're in a catch-22 in terms of you can't give a licence until the environmental assessment is done, so this allows the process to continue.

In terms of the oversight, we continue to do inspections, so the oversight during the current phase would continue whether there was a licence or not a licence. In the monitoring phase, we do annual inspections. We have full power to enforce anything we want -- not anything we want, but if there are health and safety concerns, we could issue orders as we've done in the past.

So it doesn't change the regulatory oversight in terms of the current monitoring -- you know, sort of, monitoring phase right now. What an exemption would not allow them is to proceed with the remediation work.

MEMBER VELSHI: Thank you.

THE CHAIRMAN: Thank you.

Dr. McDill.

MEMBER McDILL: Thank you.

I wonder if you could first just run us through what all the pictures were that were unlabelled in your Appendix B. I understand they're all photographs of the site and some of them are clearly in the winter, but - - and some of them are clearly, I think, new diesel tanks compared to, say, old ones, but maybe you could just quickly bring them up and run through them.

MR. MULDOON: Joe Muldoon, for the record.

We'll just see if we can bring them up on the screen. I'm not sure that we can.

MEMBER McDILL: Yeah, it's on page 120.

Bring up your PDF or ---

(SHORT PAUSE/COURTE PAUSE)

THE CHAIRMAN: Anybody got a digital copy here? Online?

MR. ELDER: I have a digital copy on a

stick. We can try and make them work.

THE CHAIRMAN: Well, we -- our technical whiz kids can fix this.

MEMBER McDILL: Is the world going to blow up or something?

(LAUGHTER/RIRES)

MEMBER McDILL: As long as your USBs are practicing safe computing, it should be OK.

THE CHAIRMAN: Moyra, show them how it's done.

(SHORT PAUSE/COURTE PAUSE)

MEMBER McDILL: Thank you. Start around page 120. Start right around there, please.

MS. YANKOVICH: This is Tamara Yankovich, for the record.

Thank you for bringing that up onto the screen.

The general intent with the photographs in Appendix B was to indicate that there were no signs of trespass on the site in the winter, like there weren't signs of, you know, footprints or tracks on the site other than those of the site security, but I can walk through the different photographs and just show you what they are.

The photograph depicted here is the dock warehouse. This is the only historical building that is

left on site. It is currently -- you can signage on the side of the dock warehouse; that signage indicates that the dock warehouse is an area where asbestos-containing material is being stored. In accordance with the work that has been done, SRC gained approval to store the friable asbestos in the dock warehouse.

That's another angle of the dock warehouse.

This is a -- these are the remaining diesel storage tanks that are present on the Gunnar site. Most of the diesel storage tanks were mobilized off, but SRC wanted to ensure that we had diesel available onsite in the event that we are able to mobilize to the site, so that's what that is. You know, this diesel that is currently on the site is present in those tanks.

MEMBER McDILL: So if I may, these tanks are safe? They've been checked, tested?

DR. YANKOVICH: Yes. Yes, they have.

MEMBER McDILL: Do they have diesel in them?

DR. YANKOVICH: Yes, they do.

MEMBER McDILL: Okay.

MR. STENSON: For clarity, the diesel tanks were brought to the site to facilitate the demolition.

DR. YANKOVICH: Yeah.

MEMBER McDILL: So these are new tanks

then, they're not ---

MR. STENSON: That's right.

MEMBER McDILL: Thank you.

DR. YANKOVICH: That's the sea cans which are being used for the storage of materials on the site.

That just shows the soccer field or the sports field which is facing out if you're back was to the diesel tanks.

You can see in that photograph that there is a barge. It is owned by the owner of Indian Head, Mr. Chris Lambert, and he asked us this fall -- because of safety reasons, he couldn't bring it across to Indian Head and asked if we could temporarily store it on the shoreline of the Gunnar site and SRC agreed to this.

THE CHAIRMAN: But you do see tracks.

DR. YANKOVICH: Yes, those are tracks. There was one set of tracks that were observed and it's listed in the CMD and it turned out that it was the conservation officer that was travelling through the area from Stony Rapids, but otherwise all the tracks on-site are the tracks of our security staff that are visiting the site every week. Those are tracks of -- that -- like we are aware of which tracks. I don't know which ones are the one of the conservation officer or which ones are of our security, but.

This just shows the camp which has been -- it's in a shutdown state for the winter and you can see that there's no indication of any tracks between the different parts of the camp.

Again, just another angle. These are just all the same types of pictures. I probably put too many in.

This just shows that there's no snow that was removed for people accessing areas on the site.

Yeah, it's all the same. I probably put way too many pictures in.

Yeah, that's part of the camp.

MEMBER McDILL: So this too is a new trailer?

DR. YANKOVICH: Yeah, these are new trailers. These were mobilized to site at the beginning of the work that was conducted in 2011.

MEMBER McDILL: Maybe you could identify anything that's old ---

DR. YANKOVICH: Okay.

MEMBER McDILL: --- and still left.

DR. YANKOVICH: Okay.

MEMBER McDILL: We'll assume everything else is new.

DR. YANKOVICH: Yes, okay.

Yeah, yeah, just keep -- yeah, this is all just different parts of the camp. We just wanted to show you that there are no signs of, you know, of anybody going in areas on the camp where they shouldn't go.

That's the SRC laboratory trailer.

That's the incinerator and that was the dry where people -- where the workers would go in the clean end -- clean out of their -- of their clean clothes and then they would go around and change into the work clothes through the back, so that's what that is.

MEMBER McDILL: Thank you.

THE CHAIRMAN: Does that mean that we don't need to go and visit anymore?

DR. YANKOVICH: No, we think you should. No, it's okay.

MEMBER McDILL: With respect to the barge, one of the concerns we had previously was that there was local use of the site. Does CNSC have any issues with the barge? I mean, I assume the waves are too high for the operator to take it around the point.

MR. STENSON: Ron Stenson, for the record.

No, we don't have any concerns. First off, if there is casual access to the site, it's not really a concern for us. Our biggest concern before was access to the buildings which are now gone.

And as far as the barge, the person has parked it there and then left. It's not an occupancy issue.

MEMBER McDILL: So is there anything left on the site that is of an urgent or pressing nature now?

MR. STENSON: Ron Stenson.

It depends. Not of an urgent or pressing nature. There are no immediate hazards on the site certainly of a radiologic nature. The physical hazards have been greatly reduced and the chemical hazards, although they're -- if someone were to intrude on the hazmat storage area, they could do mischief. They could cause themselves harm, but it's a fenced and signed area and there's been no sign of anyone doing that. It's fairly remote and the number of visitors to the area during the winter is zero and during the summer, there's more staff there doing research and so on, so it's greatly reduced from before when it was an unoccupied site and it was sort of a tourist draw to go see an old abandoned site.

MEMBER McDILL: With respect to the airstrip, SRC used the airstrip to bring things in, so the airstrip is now provincial responsibility and there's no casual use of the airstrip; is that correct?

MR. MULDOON: Joe Muldoon, for the record.

The airstrip is -- currently has not changed its use. It's currently the same. It is -- what -- the airstrip is off the site, the mining site. Between the airstrip and the mining site, there's a locked gate with blocked access, so the airstrip is still being used, at this point, by local outfitters and obviously, at this juncture, it's important that we're able to access the site as well.

MEMBER McDILL: Thank you, Mr. Chair.

THE CHAIRMAN: Thank you.

Mr. Tolgyesi.

MEMBER TOLGYESI: Merci, Monsieur
Président.

On staff slide 10 about safety performance, you're saying that the safety at the site has not changed from previous update and there are some localized contaminant impacts and impacts are minor, but pose long-term potential hazards for fish. In the last bullet, you are saying that preliminary human health risk assessment of the -- on the remediated site indicates a need for site remediation, so is something which is, you know -- my colleague was asking what's urgent is something which is need to be done on the very short-term on -- regarding the safety or not?

MR. ELDER: Peter Elder, for the record.

I'll pass in a minute to Mike Rinker about the situation.

What we've done so far is to say there is restricted access to the site, so -- but in the future, they would like to go to a situation where you would have casual access site would be allowable. There are areas where you would not allow casual access at the current time, especially in the fact that there are tailings that are not covered, so that if someone accidentally camped in the tailings, you could potentially get exposures by doing that.

Mike Rinker can give you a bit on the risks.

MR. RINKER: Mike Rinker, for the record.

I'll just add a little bit.

The tailings are a possible camping site because they're one of the few very flat places in the area, so access needs to be controlled.

The risks would be -- would occur if somebody camped there for several months and there is enough site presence to avoid that now, so it's not a hazard that it needs to be immediately looked after, but in the long-term it does.

Environmental footprint has been fairly stable for years. It is not large; however, the loadings

of contaminants from that facility is fairly large, so the site does need to be remediated, but whether it gets remediated next year or the year after is not that important for the protection of fish. It's just that the work does need to get done.

THE CHAIRMAN: Can I jump on this? In their -- in SRC's presentation on page 69, 70 and 71, I have this -- and 72, I actually found it useful, at least to understand, the various contamination. It's like pictorially with colour code, but really what I'm trying to get a handle on is how dangerous are those sites and you know, it looks like there's some colour code that shows, let's say, red as many times above background, but are they really a health threat? I don't know, maybe we can get Dr. Demeter to help us on some of the interpretation on some of these things. Are we still having these things online? It's hard to read all -- it's very hard to read what the actual level is.

MR. DEMETER: Sandor Demeter, for the record.

I think based on the values that have been presented with the -- between 1 and 15 milliSieverts per year for someone who had continual exposure, the usual advice from a public health point of view would be prudent avoidance.

So although many of the procedures we do in medical radiography or nuclear medicine meet or exceed these values considerably, if there's a chance to remediate down to less than one milliSievert that would be prudent.

The issue of whether there's a health risk or not, I think it's a theoretical risk based on modelling for which I could never -- I don't think I could ever demonstrate without large -- phenomenally large populations and very long timelines, whether someone camping there for three months would have any elevated risk over someone camping somewhere else.

So my advice is if these are remediable risks, that prudent avoidance be used to not have people spend -- exceed more than casual time in these areas until they are remediated down to normal background levels.

THE CHAIRMAN: But what's your advice for trappers, hunters, casual passers-by? I mean there's three different type of ---

MR. DEMETER: Yes, based on the information provided to me on the colour code between -- Sandor Demeter again for the record -- between 1 and 15 milliSieverts per year on this colour scale, based on that advice, I would have no issue with casual passers-by, trappers, occasional time on this piece of land. I'd have

more concerns from a -- again an abundance of caution and prudent avoidance point of strategy if anyone who wanted to stay there for, you know, for two or three months kind of thing.

But for people who are trapping by -- or walking by, trapping, you know, casual passers-by, I don't see this as being a significant health hazard from a human health point of view.

THE CHAIRMAN: Thank you.

Mr. Tolgyesi?

MEMBER TOLGYESI: Sorry, I should go back here. On Page 11 of your presentation, you were saying that there is some potential for acid generation -- mine acid drainage probably because of tailings. How far or what extent you could -- you expect that the mine acid -- drainage could be generated?

DR. YANKOVICH: Tamara Yankovich, for the record.

There's localized areas where there could be acid generation. In particular there was some tailings area that is just -- that had flowed or had flowed from the Gunnar main tailings to the into Catchment 3. And so there's a triangle of tailings that was identified as potentially acid generating but, you know, it's localized, from our understanding.

MEMBER TOLGYESI: And is no special or specific measure to do when acid generation is happening compared to other contaminants like uranium and radium?

MR. MULDOON: Joe Muldoon, for the record.

The remediation options that we're looking, with respect to that particular area would be to either cover those tailings in place or pull them back onto the Gunnar main tailings and cover them, so that the gamma -- the kind of remediation approach that we would take probably more based on gamma than acid generation would look after that issue for us.

MEMBER TOLGYESI: My last will be this. I was going back to security. You were saying that the airstrip is used in the summer, if I remember well, these planes on wheels instead of landing on the water.

Is there any potential -- do you have somebody in the summer who is supervising or who is controlling, or verifying, or checking once in a while what's happened there, if it's some eventual penetration to the site?

MR. MULDOON: Joe Muldoon, for the record.

I'm just wanting to ensure that I understand the question. Could you ---

MEMBER TOLGYESI: The airstrip is used by -- what do you call -- by operators. You were saying that

the road has blocked the access route but, you know, we are used up in the north that the road is not necessarily the main access. Okay? Because I was living up in the north, not there but another place, but it was -- the barrier in the road was not a barrier really. So I'm asking how far you could control that there is no collapses?

MR. MULDOON: Joe Muldoon, for the record.

The airstrip -- when somebody is to land at the airstrip there is a road that comes down and there's maps that show that. As I mentioned, that road is gated. Where we've gated it is in a low area and it is very difficult to come off that road and to get around if you're on an ATV or something like that.

Through the summer months when many -- when most people have access we have people -- there's always somebody on site or there tends to be somebody on site so that we would -- we are able to control the access. That gate is locked at all times.

It -- in order to come through, when you get into some of the tailings or some of the other areas of the site, the only way that they'd be able to come in would be to come in by Langley Bay and up across it. You can't get down through the site and into Gunnar and some of those other areas. The terrain is too difficult. It's

well signed over in the Langley Bay area and as long as we have some -- and we generally have somebody up -- there's enough work to be done up on site that we will have somebody up there that can ensure that there's not any unwelcome or unsafe access.

THE CHAIRMAN: Thank you. Anybody else? Any other question?

Let me -- you know I -- on SRC presentation, on for example page 33, I have some problem with the units and the limits. In Zeemel Bay for example you said there's no site specific guidance value for uranium -- for radium 226.

I thought we do have very specific guidance for radium? What am I missing here? And if you look at your figure on 25, which is on your page 65, I thought all the guidance that you need is normally -- the guidance is the Saskatchewan drinking water eventual target? Is that -- I'm missing something here.

And by the way, as an aside, I'm actually looking and I'm looking at the units. Some of the units sometimes you're using for radium-226 in milligrams per litre and sometimes becquerels per litre. It's a bit confusing.

DR. YANKOVICH: This is Tamara Yankovich for the record, the units should be becquerels per litre,

for Radium 226, and they ---

THE CHAIRMAN: Okay.

MS. YANKOVICH: --- should be milligrams per litre -- I guess we should have -- I think -- I just saw, too, that sometimes the uranium was in micrograms per litre and sometimes in milligrams per litre. They should have ---

THE CHAIRMAN: Right.

MS. YANKOVICH: --- used consistent ---

THE CHAIRMAN: And sometimes there's no units.

MS. YANKOVICH: Yes. We should be a little more consistent.

THE CHAIRMAN: Like, Figure 21, no units at all.

So there are people who actually read this stuff, and are trying to understand what does it mean, so I just want to make sure that you pick this up.

But in terms of guidance, I thought for every site and for every kind of a facility, there is very specific guidance.

MS. YANKOVICH: This is Tamara Yankovich, for the record.

The Saskatchewan surface water quality objectives are based on those of the Canadian Council of

Ministers of the Environment. Those are based on the most sensitive species -- protection of the most -- individuals of the most sensitive species at the most sensitive life stages, and during the highest exposure periods possible, so they tend to be quite conservative.

And so in the Gunnar environmental impact statement, SRC suggested, for contaminants of potential concern in receiving environments, that site specific remedial objectives be used, that are more realistic of the types of species that are present and of the exposure conditions that they may come -- or they may be exposed to and so SRC proposed in the EIS site specific remedial objectives using the Canadian Council of Ministers of the Environment, like approaches that are -- that are documented.

THE CHAIRMAN: Staff? I'm not sure I caught all of that.

MR. RINKER: Mike Rinker, for the record.

If I could give an example, for arsenic, which is a key constituent of many of the other mines, the surface water quality objective is 5 micrograms per litre. That value was determined by the protection of a species that is most sensitive; it's a plankton.

But there's no indication that that plankton even lives in Northern Saskatchewan.

Nevertheless, we use it because it's very conservative and it makes sure that the environment as a whole is protected.

In the case where, for example, Gunnar, where there's some remediation, the water quality objective for uranium is based on a very sensitive species. I'm not sure which one it is, but if that species is not actually present, then you can -- there is a process and a methodology to derive a site-specific objective. That was followed by SRC, and it's being reviewed currently.

THE CHAIRMAN: Okay, but it's not really clear, because, normally, in many of those representations, we do use the Saskatchewan guidance for drinking water as the ultimate objective for remediation. You're saying that in some of those cases, we'll accept less than that?

MR. RINKER: Mike Rinker, for the record. Just to be correct, it's not always the drinking water standard. It is the objective for the protection for the aquatic life, and they can differ from drinking water values.

And as a first cut, one would always use the published value that is in the Saskatchewan surface water quality objective. However, if you have a site-

specific circumstance where you're trying to clean up or remediate, and you are exceeding it, then you -- then as a first screen, you use that objective.

If you're below that, you know there's -- everything is protected. If you are above it, then you do a next, more detailed type of assessment to determine, well, are the things that live there protected? And by knowing what lives there, by doing the monitoring, you can come up with a site-specific number.

THE CHAIRMAN: But the only -- again, I don't want to dwell on this, but the only reason you would do this is eventually to put it under institutional control of some sort, rather than -- you will not tell the local population, "It's now okay to drink water from that facility?"

MR. RINKER: Mike Rinker, for the record. We wouldn't modify the drinking water standard. We're not at this point, because people are people, no matter where they live. However, if there's -- for the protection of aquatic life, if that value that is published is based on some species that is not present, then it is possible to come up with the site specific number for the species that are present.

So we are talking about -- not -- we're talking about values for the protection of people, we're

talking about values for the protection of the environment.

THE CHAIRMAN: Right. But, again, it's going to be really tough to explain, particularly to local inhabitants, that -- what you just said, that it is above the drinking water guidelines, yet it's okay to drink it.

MR. RINKER: Mike Rinker, for the record.

I want to be clear -- I would not ever say that.

If it's above the drinking water quality objective, or a standard, we would never tell people it's okay to drink.

THE CHAIRMAN: There's always going to be some sort of advisory here, associated with those facilities. I just want to make it clear, because it wasn't clear to me the differentiation here, when we use guidance as the objective.

MR. RINKER: Mike Rinker, for the record.

I guess one thing that is a bit complicated with uranium is that the value for the protection of aquatic life is lower than the value for the drinking water standard.

So if, for example, for the protection of aquatic life it's 15 micrograms per litre, the drinking

water standard is 20 micrograms per litre.

THE CHAIRMAN: I have no problem in being over-conservative. I have a problem about beating the drinking water, being above the drinking water.

Am I the only one in this? Anybody else has any questions?

Okay, the last words, anything you want to raise now with us? Staff?

MR. ELDER: Peter Elder, for the record.

I don't think I have anything else to say, except that the next phase is looking to make sure that we get acceptance by all the people involved in the environmental assessment, that the latest submission from SRC is acceptable, and that will be in the next month or so. And then that will be a true test of whether we're on schedule, overall.

THE CHAIRMAN: And I'd like you to raise -- about the line, if there's any ---

MR. ELDER: Absolutely. You know, the protocol has mechanisms for anybody in the protocol to raise it up. To date, none of them have actually come to my level yet, but they can go my level, they can go to Mr. Sanders' level, and we will bring them up further if we need to.

THE CHAIRMAN: I'm not suggesting that

it's a solution, but once we issue an order, things are starting to happen.

So we're very happy with the progress done under the order -- I'm not suggesting we should continue to issue another order, but if things don't get resolved we may have to revert to something like that. Anyhow, I don't want to prejudge what the Commission will do on this.

So thank you for your presentation, and patience. Thank you.

So this concludes the public meeting of the Commission. Thank you all for attending.

MS. MCGEE: Just as a closing request, if you borrowed interpretation devices, please remember to return them to reception and claim your identification card. Thank you. Bonne fin de journée.

--- Upon adjourning at 11:21 a.m.

La séance est suspendue à 11:21