Cameco Corporation:
Application for an amendment to
the Cigar Lake Project Uranium
Mine Construction Licence

07-H21.1 / 07-H21.1A
Oral presentation by
Cameco Corporation

MR. GITZEL: Good morning. Madam Chair, Members of the Commission and staff, for the record, my name is Tim Gitzel. I am the Senior Vice-President and Chief Operating Officer of Cameco Corporation.

With me here today in support of our application for renewal and amendment of Cigar Lake's construction licence are: Bob Steane, Cameco's Vice-President, Major Projects; Grant Goddard, General Manager, Cigar Lake; Rick Forbes, Mine Manager, Cigar Lake; Jean Alonso, Director, Compliance & Licensing; John Takala, Director, Safety, Health, Environment and Quality Systems; Steve Lowen, Director, Corrective Action Project; Dr. Lee Atkinson, Hydrologic Consultants; James Hatley, our Senior Geotechnical Engineer; and Dr. Richard Brummer from Itasca Canada.

Also in attendance are other technical

experts that are involved in the Cigar Lake project. I'd also like to recognize the representatives from our partners AREVA and Idemitsu, and from our prime mining contractor Madjatic Thyssen Mining.

At our last appearance here in June to consider the results of the TapRoot investigations, I committed to the Commission to make the necessary changes to enhance management systems and risk assessments, and to correct the issues identified in the TapRoot reports; in short, to foster safety culture at Cigar Lake and at our other operations.

While meeting the expectations of the Commission and other stakeholders is important, our commitment is equally driven by Cameco's core values of insuring the safety of workers and protecting the environment.

We believe that safety culture grows out of a strong management system with clear directions and clearly articulated requirements with clear accountabilities.

Toward that goal we have been extremely busy and have made and continue to make significant progress. First, the senior operations team has been restructured and strengthened by the addition of roles with responsibility and accountability for major projects:

environmental leadership, innovation and technology, safety, health, environment and quality systems; these in addition to the three operating divisions of mining, fuel services and U.S. mining.

All of these functions are now integrated into the operations team reporting directly to me.

As well, the senior management of the Cigar Lake Operation has been restructured. The Cigar Lake management system has been overhauled to streamline and integrate our programs, apply additional technical oversight and renew the commitment of the people who apply these systems and make them effective.

We have increased the rigour and effectively applied risk assessment to our activities. We have established a corporate level group to set technical standards and apply additional expertise and oversight in mine engineering matters.

We have gone back to fundamental principles in geosciences, adopting an interdisciplinary approach to ensure sound mine design and better control of risks.

We have also initiated a Corrective Action Plan Implementation Project to ensure corrective actions are implemented and verified as the remediation work proceeds.

You will hear more about the progress we

are making on each of these measures in the presentation to follow.

Most encouraging to me is the cultural shift we are seeing at Cigar Lake. Site staff and workers have readily accepted more formalized risk assessment, quality management, safety and training systems. People at all levels are taking it upon themselves to ensure that things are done properly and in compliance with formal processes.

Today, people at Cigar Lake are consistently reviewing work, assessing all risks and safety hazards prior to undertaking that work.

While working to address the issues identified in the TapRoot investigations, we have greatly expanded available resources and are working to focus our people on the tasks and initiatives that will restore the confidence of our stakeholders.

Since the beginning of the year, we have added 47 professional and technical specialists in fields such as geology, metallurgy, engineering, safety, geophysics, quality and radiation protection.

Our CEO, Jerry Grandey, has met with employees at each of our Saskatchewan sites to make it clear that excellence is expected and that employees at all levels in the organization are accountable for

achieving excellence.

Restoring confidence of the Commission and staff depends on our progress in making real changes and this takes time. As I have outlined, Cameco is fully committed to doing so.

We have changed direction. We have a clear plan to safely complete remediation and resume development and are committing the resources and effort necessary to execute it.

We know we have a large challenge in front of us but we are committed to achieving operational excellence and a strong safety culture at Cigar Lake and at all of our operations.

Thank you. And I will now turn the presentation over to Bob Steane.

MR. STEANE: Thank you, Tim.

Madam Chair, Members of the Commission and staff, for the record, my name is Bob Steane and I am the Vice-President of Major Products Division for Cameco.

In this role, I have responsibility for the Cigar Lake project.

Our presentation this morning is intended to update the Commission on the current status of the Cigar Lake project by reviewing the physical work involved in the remediation of the mine, updating our progress on

the corrective action plan and giving an overview of the licensing request that Cameco has before the Commission today.

Lastly, I will give some summary concluding remarks.

Following the inflow event, a five-phased mine recovery plan was developed. Each phase represents a distinct grouping of the work in chronological order, towards ultimately completing the development of the mine.

Phase 1 consists of securing the mine; that is, sealing the inflow area to prevent water inflow into the mine when it is dewatered, and doing those things on the surface necessary to prepare for the pumping of the water out of the mine.

I am pleased to report that there have been a number of activities carried out safely and successfully.

All of the directional drilling was completed allowing concrete to be placed underground in the desired areas.

We were also successful in drilling four large diameter holes through the lowest level in the mine into which we placed submersible pumps into each hole. Each pump has a design capacity of 250 cubic metres per hour, giving a total capacity of 1,000 cubic metres per

hour. These pumps provide dewatering capability independent of the shaft and are controlled from surface.

There are a few weeks remaining to complete the cementing and grouting of the inflow area, following which we plan to commission the four submersible pumps to ensure they are operating properly.

Simultaneously, we plan to conduct a preliminary assessment of the plugs integrity by a limited lowering of the water level in the shaft to allow measurement of the water inflow into the mine at that differential water head and, thus, some information on the plugs' effectiveness.

Now, Phase 2 is the dewatering of the mine and Phase 3 is securing, as necessary, the underground workings. While these are listed as two separate phases for the purpose of grouping the work, once commenced, the work in the two phases should be carried out continuously.

These phases would start with a more rigorous plug integrity test, with the water level in the mine lowered in step stages with an assessment of the water inflow volume at each step that would be compared to that which would be expected with the inflow effectively sealed.

The water would thus be completely removed from the mine by the end of the plug integrity test,

unless the plug was found to be not effective, in which case the mine will be allowed to fill again and further work initiated from surface to seal the inflow area.

Once the mine is dewatered, then inspections of the workings will be undertaken by the mine rescue team and any actions necessary to secure and ensure the safety of the mine would be taken. This would include the installation of an engineering concrete bulkhead in front of the pour barrier plug.

Phase 4 would then follow, which is to restore the mine to the condition it was in immediately prior to the rock fall event.

And lastly, Phase 5 is the resumption of the development of the mine to ready it to come into production.

One of the items that has become apparent through our revised geotechnical assessment of the structural integrity of the mine indicates a need for additional assessment of the existing large underground openings. Of particular interest are the two largest openings, the clarifier and the receipt of the run-of-mine ore.

A diamond drilling program is underway to obtain drill core samples from the rock immediately above these two areas to allow further assessment to be done.

The assessment will be done prior to dewatering the mine.

Should the assessment indicate that further physical action is required, we have identified four possible scenarios that could be deployed, depending upon the results of the assessment. These are depressurization of the immediate area, grouting, freezing or, lastly, backfilling of the opening.

A lot of thought and planning is being given to the re-entering of the mine. Initially, it will be done by the mine rescue team and their first goal is a thorough inspection of the shaft and then the mine workings.

Initial stages of the plan are the refurbishment of the shaft with establishment of ventilation, installation of communications and installing a new ladder way. The new ladder way will provide another means of egress during the remediation phases of the recovery.

The plan will have clear decision points and pre-determined actions identified prior to starting the activity.

A decision already made is that the bulkhead doors will not be used until an assessment of the door’s integrity is complete and any necessary repairs and/or changes have been made.

We have embraced a back to fundamentals approach deploying the latest state of the art geophysics and numerical modelling in all aspects of the mine plans. Core geo-scientific disciplines are being studied simultaneously with the studies being completed sequentially. The results from one study are inputs to the next study.

The natural progression is structural geology and geophysics feeding into hydrogeology and then rock mechanics leading to a mine design and mining method verification.

The understanding of the interaction between hydrogeology and rock mechanics is being rigorously studied as joint water pressure is being incorporated in the new rock mechanics modelling.

The next four slides comprise the key learnings and activities from hundreds of pages of engineering and geological reports compiled since the October 2006 inflow.

A series of plan maps are being produced from serial sections through the ore body and they will be used as the base for both the hydrogeological modelling and the identification of high risk zones.

We have also initiated and are nearing completion of a number of geophysics techniques including

a gravity survey, induced polarization, down-hole seismic survey and others to provide information on the structure, particularly as it relates to the mine plan and the unconformity.

We have used the vertical seismic profiling technique to good end in the preliminary design of another Athabasca deposit, the Millennium Project, which is shown on this slide. We anticipate having the survey completed at Cigar Lake by the end of the year.

Results from all the geophysical surveys discussed here are being combined in 3D and a rudimentary 3D model has been developed. These data will be combined with the results of the seismic survey to further enhance the 3D model, creating a more robust interpretation of the Cigar Lake mine subsurface.

We commissioned Hydrologic Consultants Inc., based in Denver, to modify the preliminary three dimensional groundwater flow model previously developed by Golder Associates. HCI used the modified model to back calculate the inflow during the October inflow event and to estimate possible maximum inflows into the mine.

The previous modelling was quite preliminary in terms of its representation of both hydrogeologic units and geologic structures. HCI is in the process of developing a new, more detailed model that

incorporates new geologic and hydrogeologic data that will be calibrated to the two inflow events.

The calibrated model will then be used to predict mine-wide seepage for the complete mine and catastrophic inflows under various geotechnical failure mechanisms.

The output of these predictions will be used to assist in mine planning and design of water management systems. It is anticipated that the detailed modelling will commence in November of this year.

Many technical challenges in putting all the information together are being worked on. Itasca Canada's analysis of the October 2006 inflow failure shows the effect of integrating all the information.

The bottom left picture shows stress acting on the rock mass alone does not constitute a major failure.

The bottom middle picture shows the addition of the map structure is of small consequence. The bottom right picture shows failure occurs when hydraulic pressure is applied to map joints. Understanding the interaction of joint water pressure is the most critical factor in the post-failure analysis, current verification and future design considerations.

The fundamental mine design is being

challenged using the information that is coming from all the geotechnical evaluations that have been described, including changing the mining horizons and freezing from surface. The impact on the jet boring system performance is also factored into different designs to assure compatibility of the mining method with the design.

Shaft 2 is seen as an essential component to the completion of the ultimate mine development because it will provide a second means of egress and additional ventilation.

There were a number of recommendations in the TapRoot investigation report which are being incorporated in the plans for the resumption of work in the shaft.

Some of the geological and geophysics work previously mentioned have been specifically targeted at providing information and understanding on the structure encountered in the shaft to better develop our plans going forward.

Initially, we planned on backfilling the open geologic structure from surface through diamond drill holes placed strategically to first give further geological information on the structure. We will then grout and/or cement the open standpipe to prevent water entering the shaft, dewater the shaft and establish a

ground control program of freezing or grouting to allow resumption of the sinking of the shaft.

Coming out of the TapRoot Reports on the incidents was a comprehensive Corrective Action Plan Implementation Project called CAPIP, which captured all of the recommendations and associated actions into a format that can be planned, tracked and progress reported.

A further development with the CAPIP was that each of the actions was evaluated as to which stage of the mine remediation plan it was most associated with, and these were then designated as hold points. These hold points are seen as hard hold points, meaning that all the activities associated with the recommendation must be complete before any further associated remediation activities can be initiated. This has been incorporated as core to the overall remediation plan.

We have made progress on some of the activities required before we can commence Phase 2. The first four completed activities have been internally verified and submitted to CNSC staff for their review.

These include the risk-base project management process which we now use to assess all high-risk activity at Cigar Lake; updated audit procedures; formal corporate technical review; and a safety and health risk assessment report which reviewed the October 2006

water inflow event and developed specific safety-related corrective action recommendations that we are now incorporating into the site emergency procedures.

There are a number of CAPIP activities that require implementation during Phase 2. There have been some good progresses on some of these important activities as well.

For example, a comprehensive Hazard Awareness Training Program has been developed and specifically targeted for the hazards present in underground workings in the Athabasca Basin.

In addition, the revisions to the site's emergency response procedures are well underway and employees will be trained in the new procedures before anyone is allowed to enter -- re-enter the mine. During Phase 2, we expect to conduct independent audits of relevant completed corrective actions as this will be the appropriate time to validate the effectiveness of the corrective action activities.

An activity-based project schedule is being further developed and refined. This will be used to provide comprehensive progress reports as well as assist in planning third party and CNSC validation activities.

Significant progress has been made on the regulatory expectations that the CNSC outlined in a letter

to Cameco on June 28th.

With respect to the implementation of a systematic approach to training, 46 courses have been developed and delivered in areas like emergency response, mine rescue, water treatment, environmental monitoring and radiation safety.

Further, a systematic approach to training compliant program in underground hazard assessment training has been developed, as I mentioned, and it is scheduled for initial delivery to people in November at Cigar Lake. It will likewise be delivered to Cameco's other operating underground mines.

Further, a mining division contractor management standard has been developed and it is in the process of being implemented. An internal review of the effectiveness of this standard was conducted by Cameco's program manager of safety systems. He generally found the implementation well underway. He also noted opportunities for improvement which are being acted on.

The use of job hazard analysis is now a routine part of how work is carried out at Cigar Lake.

The mine development and control program is evolving as the corrective action recommendations are being addressed through the Corrective Action Plan Implementation Project.

All of the future remediation phases will be supported by detailed technical submissions that clearly show the applicable hold points.

As mentioned in Mr. Gitzel’s opening remarks, the area of governance has received a lot of attention both at the corporate and site level, with particular attention to Cigar Lake.

Initially, an organizational design consultant was engaged specifically for identified need for longer term strategic planning and environmental management. However, the Cigar Lake inflow events in April and October 2006 changed the focus of this organizational review.

Senior executives have taken a leadership of renewing our focus on the core business activities and a strong commitment to operational excellence. There has been a clear demarcation between divisional and corporate structures with more resourcing and direct alignment of civil engineering, hydrogeology and safety, health and environment and quality matters within the mining division.

The establishment of a corporate level group to set divisional technical standards and provide expertise and oversight of mine engineering matters and dedication of a senior manager to specifically oversee

Cameco’s responses to corrective actions coming out of Cigar Lake events; adding additional -- and we have also been adding additional people to carryout these functions.

Specifically as this applies to Cigar Lake organization, there have been significant changes to the organizational structure and clearly identifying accountabilities.

In addition to the creation of the major products division with accountability for Cigar Lake, there is now in place a new general manager and a mine manager.

The role of safety, health, environment and quality has been split into separate superintendent positions, one focussed on safety, health, environment and radiation; the other on quality, compliance and licensing. The new Superintendent of Safety, Health and Environment is in place while recruiting is ongoing for the Superintendent of Quality, Compliance and Licensing.

Further, in the area of governance, the senior Cigar Lake management team is involved in a process of clearly articulating the roles and accountabilities, and this process is cascading through the Cigar Lake management and supervisory team.

We are committed to having a good safety culture at Cameco and at Cigar Lake, in particular, and in

improving it. We have been doing important foundational work for improving our safety culture this year.

As noted, good progress has been made at strengthening the governance through a reorganization aimed at improving accountability at both the corporate and site level. Over the last several months, senior management has reiterated the importance of excellence and accountability. This has been done through written messages and meetings and site visits.

As we look back on the past problems at Cigar Lake, we see weak implementation of our programs as a significant contributing factor. We have intentionally addressed this point through the structured system of CAPIP with specific hold points.

We have set the bar for ourselves such that we must effectively implement required corrective actions, including our management system, before we commence the next phase of the remediation plan. This process we have adopted will reinforce the importance of effectively implementing our management system. This is and will continue to change our culture.

We've already started down this path. Our CEO has noted that a questioning attitude after all is absolutely essential in our industry. We have made good progress in improving our risk assessments and

incorporating the results into our planning process.

Over this past year, Cameco has revised and enhance our job hazard analysis procedure and this has been readily adopted at Cigar Lake.

Since the flood, we've done over 3,000 job hazard analyses. The procedure for assessing unusual or non-routine is a good example of how our management system is promoting a questioning attitude.

As we continue along the journey to improving our safety culture, we will be conducting a formal safety culture assessment in the new year at Cigar Lake. This will build on past assessments we have done over the last several years at some of other operations.

During this process of remediation, we understand the importance of communications, both internally to our workforce and to the CNSC staff. In particular, we understand the need for the CNSC staff to see tangible results of our improvements.

We look forward to providing these to the CNSC as we progress through the remediation process.

The quality group has been reorganized to help focus on the management system improvement and implementation. The group now reports directly to the General Manager as part of the Quality, Compliance and Licensing Department.

The group is now responsible for the facilitation, implementation and verification of the development of quality documents, document control, change control, risk assessment, and non-conformance tracking, as well as auditing, licensing, permitting and regulatory documents.

Over four person years have been devoted to revising and updating the management system and associate documentation during the past year. When completed, there will be 12 programs, not including the construction-related programs.

Great effort is being made to ensure that procedures and work instructions are complete, well organized and practical, using the process mapping technique. The approved documents are on the Cigar Lake network for ease of access and document control.

Activities that have been proceeding in parallel to Cameco’s licence amendment application have led Cameco to modify its original licence amendment request which was for an activity-based licence for all phases of the remediation and then completion of development and construction, with regulatory reporting controls directed by the Commission.

However, Cameco’s ongoing re-evaluation of the Cigar Lake Mine Underground Development Plan, largely

triggered by the inflow investigation process, has not been concluded. Consequently, the information available to assess the development and construction completion phase is not complete at this time.

However, subject to CNSC's acceptance of the to be developed detailed phase submissions, Cameco does believe there is sufficient information to support the completion of the remediation project to the end of Phase Four which represents the condition the mine was in immediately before the October 2006 inflow.

As a consequence, Cameco is now requesting a licence extension to allow Cameco to remediate the mine; that is, to the end of Phase Four, complete Shaft 2 and the outstanding surface construction elements.

As part of its Mine Remediation Plan, Cameco has proposed specific hold points for the safety critical stages of the remediation project. Specifically, these are the dewatering of the mine and the entry of personnel.

In addition, the last hold point for this licence extension is for the acceptance of the Phase Four submission. Cameco would emphasize that Phases Two and Three have been combined because suspending activities in the mine immediately after it has been dewatered and prior to having completed any essential rehabilitation work is a

concern.

More specifically, Cameco is concerned that should problematic areas be left unmitigated for an extended period following the depressurization of the mine, the risk of incurring additional problems may increase.

Cameco has based the approval process for the remediation work on the view that Cameco, as licencee, must first clearly verify to itself that it is prepared to take on various subsets of the remediation work before seeking regulatory approvals.

Cameco has attempted to structure this internal verification process to be sufficiently transparent so CNSC staff can readily satisfy themselves.

Ultimately, Cameco would apply to renew the construction licence to allow Phase Five to proceed, which is both resumption and completion of the remaining underground development upon the completion of the prerequisite action items and finalization of the Mine Development Plan.

As listed in the slide, Cameco has updated the Mining Facility Licensing Manual to capture the activities that have been proceeding as Cameco’s application has been under review.

Cameco has updated the preliminary

decommissioning plan and the main driver to the increased costs reflect the current labour market.

Throughout the process, we have kept the communities informed mainly through the EQC, Northern Elders and Opportunities North publication. More detailed information on the public engagement was documented in the two CMD submissions.

In summary, Cameco has developed a technically sound, multi-phased remediation program that has been developed to rectify the situation and return the project to its normal construction mode.

A thorough causal analysis has been undertaken on the project setbacks with the objective of developing a suite of comprehensive corrective actions to put the project back on solid footing. These corrective actions include physical, procedural and management changes and these are being put into place.

In short, the corrective actions have been integrated into the remediation program with appropriate checkpoints incorporated to ensure the work is done safely, complete with verification measures to ensure their effectiveness.

And Cameco continues to give its highest priority to the safety of persons and the environment in conducting activities at Cigar Lake. Cameco is seeking

some further clarification on the approval process so we clearly understand the path forward.

With respect to clarification on approval process going forward, Cameco understands that we have to first satisfy ourselves and then the CNSC staff that Cameco has both fulfilled its commitments and is in a position to proceed with remediation.

Cameco recognizes that approval for Phases Two and Three be by the authority of the Commission. However, Cameco would urge that these matters be heard as expeditiously as possible in the interest of project continuity and assurance of success.

Retaining and potentially increasing the momentum that Cameco is generating in relation to safety culture and quality, including training, is well served by workflow continuity and the approval process. If there is a disconnect between the proposed approval processes as remediation move forward, the potential for a hiatus detracts from these initiatives.

The difficulty that both the CNSC staff and Cameco face is with the ongoing efforts to address identified substantive issues and concerns. The procedural practice does not accord with the operation on regulatory challenges presented by the mine remediation.

More specifically, after Cameco has

verified internally that the requisite commitments are fulfilled so that it is in a position to proceed with a certain remediation activity, and the CNSC staff have satisfied themselves of the same, it's not clear how the Commission approval process will transpire.

Accordingly, Cameco supports the suggestion that the CNSC staff be delegated with the authority to approve Phase Four of the remediation plan. This view is rooted in safety culture recognizing that once activities begin, there is a flow that has to be maintained or endanger the success of both the project and the satisfaction of Cameco’s commitments.

Lastly, Cameco is approaching the Cigar Lake project with an attitude of assurance of success. That is we are examining all aspects of the project from the view of identifying and mitigating the risks such that we can assure success.

This philosophy is being translated into everything we do, from the engineering aspects of the project to the human activities that are required. The mantra of assurance of success has been adopted as a motto at the site for all activities and Cameco respectfully requests the Commission approve the amendments to the current construction licence, permitting Cameco to proceed with remediation of the mine.

Thank you. That concludes my presentation.

THE CHAIRPERSON: Thank you very much.

Now, we will turn to the presentation from the CNSC staff. This is outlined in CMD 07-H21, CMD 07-H21.A, and I will turn to Mr. Barclay Howden who is the Director General responsible for this file.

Mr. Howden, you have the floor, sir.

07-H21 / 07-H21.A
Oral presentation by
CNSC staff

MR. HOWDEN: Thank you.

Good morning, Madam Chair and Members of the Commission. For the record, my name is Barclay Howden. I am the Director General of the Directorate of Nuclear Cycle and Facilities Regulation.

With me today presenting are Mr. Kevin Scissons, Director of the Uranium Mines and Mills Division, and the Project Officer for the Cigar Lake project, Mr. Mark Langdon.

In addition, we have the rest of the supporting staff and management for our facility assessment and compliance team for Cigar Lake.

CNSC staff will present follow-up

information from supplementary CMD 07-H21.A and its evolution since staff filed our original CMD 07-H21 on August 31st, 2007.

In addition to a status update on the Cigar Lake project and the Phase One activities underway, CNSC staff will provide the supporting facts for our recommendations on the terms and conditions for the amendment to the Cigar Lake licence.

The current licence expires on December 31st, 2007. Thus, the primary purpose of this hearing is to propose an amendment to the licence to ensure continued regulatory terms and conditions for the amendments to the Cigar Lake license. The current license expires on December 31st, 2007 thus the primary purpose of this hearing is to propose an amendment to the license to ensure continued regulatory control over this facility.

Additionally we will also discuss the regulatory hold points that will be proposed for a future hearing of the commission. Though the full mine flooding event occurred over just one year ago the path forward to full mine remediation and resumption of mining has not been completely addressed as there are a number of technical and safety challenges that arise for the recovery of a flooded mine.

The licensee has already described their

main activities of focus and their proposed path forward in the first four remediation phases and how they will address the challenges expected at each phase. In the past four months the licensee has taken some important steps forward to address safety culture, governance, quality and geological issues and staff will address the elements of those components in our update.

As well, CNSC staff has been monitoring the licensee's progress closely and communicating our regulatory expectations to them. The underground mining activities of Cigar Lake remain under a safe shut down state. This status will only change if all the appropriate regulatory requirements and hold points been satisfied and if the Commission amends this construction license beyond December 31st, 2007.

I will now ask Mr. Langdon to present a summary of staff CMD's. Thank you.

MR. LANGDON: Thank you, Mr. Howden. For the record, I am Mark Langdon, Project Officer with the Uranium Mines and Mills Division in Saskatoon.

As Mr. Howden indicated the information presented today will look at a number of key factors that have arisen since the June 21st, 2007 Commission meeting. In order we will confirm the need for this license amendment as described in Commission member document 07-

H21.A outlining the revisions and status of issues since staff Commission member document 07-H21 was filed on August 31st, 2007.

Confirm the remediation Phase 1 activities, briefly update the Commission on the current project status and regulatory oversight, describe the proposed regulatory hold points and then we will finish with CNSC's staff's conclusion and recommendations.

The reason we are here today is mainly to address the license expiry issue and to lay out a proposed plan for the remediations project's path forward. The Cigar Lake facility is in possession of nuclear materials requiring that a CNSC license be maintained. As recommended by the CNSC staff and by the licensee in their application the term of the Cigar Lake construction license is proposed to be amended for another two years.

Staff's key recommendation today is for the continuation of ongoing remediation Phase 1 activities and to approve the concept of subsequent staged Cameco submissions and CNSC approvals for the remediation Phases 2, 3 and 4. The CNSC August CMD 07-H21 identified that staff were continuing to review the Cigar Lake application and proposed path forward.

The path forward at that time included a scope of activities containing mine remediation followed

by continued underground development. As there are uncertainties of certain aspects of timing for the mine remediation activities, an indefinite term was also proposed at that for license expiry.

Due to a number of factors relating to the complexity of the path forward the ongoing Cameco technical investigations and the continued review of application documents staff has since reconsidered the scope of the license and has narrowed the proposed approach.

As a result some of the key revisions proposed within supplementary CMD 07-H21.A are; both Cameco and CNSC staff agree that a scope of activities for this license proposal is limited to remediation Phases 1 through 4. Phase 5 is now proposed to be approved at a later date under a new construction license.

The second key revision is the withdrawal of license condition 1.6 that was proposed by staff in August. The purpose of this condition was to ensure that all activities proposed by Cigar Lake would be fully reviewed and approved by CNSC staff before implementation.

This condition would have also delegated staff with the power to approve all activities of Phases 1 to 5 as applied for by Cameco. The new proposed approval process, the use of regulatory hold points and the reduced

license scope, together negate the necessity for this condition and so the proposal for license condition 1.6 has been withdrawn.

Another key revision is that Commission approval be required for remediation Phases 2 and 3 and at the Commission's discretion for Phase 4, approval by Commission or by staff. The supporting attached and reference documents as proposed for the amended license have also been updated in supplementary CMD 07-H21.A. These documents reflect the revised license scope and clarify the remediation project phases and their associated activities.

And finally the indefinite license period proposed earlier has been reduced to a proposed license term of two years with the understanding that the Commission may wish to consider this proposed license term further. The revised proposals as discussed overall represent a narrowing of the scope of the license and an increase in regulatory oversight.

It is worth repeating that the amended license proposal will only provide approval for remediation Phase 1 activities at this time and further Commission approval would be required to progress to remediation Phases 2, 3 and 4.

This Cigar Lake cross-section is a simple

reminder of the general Cigar Lake mine layout, the inflow areas and the geology. The two shafts, No. 1 and 2 are shown on the left. Shaft No. 1 excavation is complete from the surface to the underground workings as shown. The workings are flooded to the level of the natural water table located about 30 metres from surface.

Shaft No. 2 was under construction when it flooded through a separate incident. The location labelled as the inflow on the slide is a current depth that Shaft No. 2 has been completed to when it flooded. Shaft No. 2 also remains flooded with water to about 30 metres from surface.

We will now provide an overview of the ongoing remediation Phase 1 activities. Remediation Phase 1 consists of low remediation activities conducted from surface and includes other general infrastructure requirements currently approved under the existing license.

CNSC staff has confirmed that Cameco's, programs and procedures are in place to manage the risks of these Phase 1 activities. Working from surface the remediation Phase 1 activities include drilling, installing, commissioning the four submersible in-hole mine de-watering pumps.

The four pumps will also serve as part of

the future emergency pumping system. It is therefore important to commission and thoroughly test these pumps before Phase 2 when humans enter the underground. This commissioning and testing will coincide with the initial Phase 1 testing of the inflow area plug integrity.

Also included as Phase 1 activities are the drill holes for fine flushing, applying grout and concrete to the inflow area, plug area observation drill holes and drill holes for future permanent plug pours. Phase 1 activities of geological and geotechnical engineering investigations are also underway with projects involving geophysics and other geo-scientific studies using both surface and down-hole methodologies.

Surface infrastructure activities of Phase 1 include significant upgrades and the commissioning of the two-stage water treatment plant, installation and upgrades to surface water and/or effluent pipelines for transportation purposes, modifications to slime storage ponds No. 2 and No. 3 and various modifications around Shaft No. 1 such as installing winches, lifting equipment and preparatory work for the installation of a Shaft 1 ladder way.

Shaft No. 2 remediation activities from the surface may also be proposed as part of Phase 1 activities. These could include Shaft 2 activities such

geophysical investigations, drilling from surface, cementing, grouting, plug pouring and possibly de-watering.

Any Shaft No. 2 activity requiring human entry underground would not be approved as part of Phase 1 as this activity would be aligned with Phase 2 and 3 mine remediation activities and their related hold points.

Thus Phase 1 activities consist of low risk remediation activities conducted from surface and do not allow human entry into the underground or mine workings. Currently the mine remains flooded. The Phase 1 activities as discussed on the previous slide are in various stages of completion.

Most activities are currently in progress and many are approaching completion. Two main ongoing activities, for example, are the final commissioning of the water treatment plant and the development of the inflow plug area using both pressure grouting and the pouring of concrete down drill holes from surface which began last July.

Shaft No. 2 remediation activities to date have been limited to down hole geophysical investigations and hydrogeology review. Cameco is currently reviewing their options in remediation of Shaft No. 2. CNSC staff views the completion of Shaft No. 2 as an important

activity to provide a second means of egress from the underground workings and as a means for improved underground ventilation.

Teleconference and web cast telecommunication meetings have also been undertaken recently with Cameco to engage the CNSC Ottawa specialists in review of Cameco's advances and planned initiatives to address geo-scientific investigations, safety culture, governance and quality issues.

The web casts involve both Cameco corporate and Cigar Lake site personnel, contractors and consultants, CNSC project officers, CNSC specialist staff. Additional meetings are planned in the future to help promote understanding, expectations and a safer path forward.

The joint regulatory group comprising the CNSC, Saskatchewan Environment and Saskatchewan Labour continue to review and approve and monitor the Phase 1 activities on a case by case basis. A JRG meeting held on October 24th, 2007 discussed the path forward as proposed in supplementary CMD 07-H21.A. The joint regulatory group members also join us today from Saskatoon.

Monitoring of the Cigar Lake mine site by the joint regulatory group members has also been undertaken through six separate site inspections conducted

during the past six months.

We have four pictures from a CNSC October 16th inspection as examples of current Phase 1 activities taking place at Cigar Lake. The first picture on the left shows an oil drilling rig that is set up in close proximity to Shaft No. 1. These rigs contain technology to enable the holes to be drilled to very accurate locations underground.

This particular drill hole is currently being used to pour concrete through the hole for the mine inflow plug area. The drill holes are also used for pressure grouting of the inflow area. The slide on the right shows three of the four de-watering wells that contain the submersible down-hole pumps. In the background is Shaft No. 2.

The four de-watering wells will also serve as part of the future emergency mine de-watering system. The four holes drilled with the oil rig go through the 500 metre level drift where the submersible pumps are installed into the floor of the drift. The picture on the left shows the upgraded water treatment plant. The water treatment plant is presently near completion of Stage 3 of a four stage commissioning process.

Stage 4 commissioning comprises increased scrutiny during the effluent treatment over a number of

months of operation. The plant is designed to treat effluent at an approved rate of up to 550 cubic metres per hour. Treated mine effluent is then sampled as it flows into monitoring ponds. No treated effluent is released from these monitoring ponds unless it meets strict environmental monitoring standards.

The picture on the right shows down-hole seismic geophysics being conducted. The tent in the background contains the geophysical equipment that gathers, stores and processes the seismic information obtained. The seismic receiver line from the tent is lowered down the drill hole located in the foreground.

CNSC staff requested that Cameco propose CNSC hold points for consideration. The proposed hold points are provided in Appendix A of Cameco's Mine Remediation Management Plan, Revision 1. The hold points are currently under staff review but have been accepted in general concept.

Each hold point consists of numerous criteria of commitments and requirements that Cameco must complete prior to moving forward. The criteria contained within a single hold point originate from four sources. The first source of criteria are the corrective action recommendations and the Cameco management responses and commitments to those recommendations as derived from five

separate tap root investigations of Cigar Lake incidents, including those of the two flooding events.

The second source of criteria are CNSC staff's requirements and recommendations including concerns raised during the June 21st, 2007 Commission meeting. The third source of criteria are the mining facility program manual, procedures and work instructions necessary to support the mine remediation activities.

And the fourth source of criteria are called technical hold points that provide requirements or limitations of a technical nature. A technical hold point criteria example would be the commitment by Cameco to continue underground inflow plug mitigation measures until such time that the groundwater inflow rate is less than 440 metres cube per hour before the mine de-watering of remediation Phase 2 can be initiated.

The 440 metres cube per hour number is based on 80 percent of the water treatment plant capacity of 550. The four hold points that relate to the subsequent remediation Phases 2 to 4 are shown on this slide. Although the details of the subsequent remediation Phases 2 to 4 are still being prepared by Cameco their concept has been found acceptable by CNSC staff.

As shown, the first three hold points apply within remediation Phases 2 and 3. Mine de-watering and

mine entry are significant activities within remediation Phase 2. Remediation Phase 3 represents securing the mine and pouring a permanent engineered bulkhead for inflow area.

Remediation Phase 2 and 3 are therefore grouped together because we do see in the time period between the end of remediation Phase 2 and the Phase 3 activities is an important safety consideration. The fourth hold point applies to remediation Phase 4 which rehabilitates the underground mine workings and re-establishes the mine infrastructure systems.

The intent of each regulatory hold point is to ensure that the necessary management and safety controls are in place prior to approval for that phase of activities. Cameco must complete, check and provide mine site and corporate and/or third party verification for all criteria comprising each hold point.

This process is tracked within Cameco’s corrective action plan planned implementation project. Staff would then review the hold point criteria as part of the remediation phase application. Overall this complex but thorough oversight by all parties should manage the risks accordingly.

Some of the key aspects of the amended license proposal are: the overall scope of the amended

license is for remediation Stages 1 to 4. The license amendment initially proposes that Cameco can only continue to conduct Phase 1 activities approved by CNSC staff. Approval for the Cameco Phase 2 and 3 application would require a hearing whereby the Commission would provide an approval for the Phase 2 and 3 remediation plans.

Remediation Phase 4 would also require a separate Cameco application for approval whereby staff propose Phase 4 be approved either by the Commission through another hearing process or by staff at the discretion of the Commission.

Currently Cameco continues with the approved remediation Phase 1 activities permissible under the existing license. From our joint regulatory group reviews, site inspections ongoing documents reviews and from a number of technical discussions and meetings, CNSC staff can conclude that for remediation Phase 1 activities Cameco has demonstrated adequate provisions for the protection of the environment and for the health and safety of persons and this should be allowed to continue.

Cameco has submitted a number of Tier 2 and 3 documents and they continue to be reviewed by staff. This includes additional assessment of the preliminary decommissioning plan with financial guarantee to be completed by January 1st, 2008.

Using the regulatory hold points CNSC staff has proposed that the Commission and staff will be able to assert firm controls in a step wise and clear manner. Overall, addressing the issues of safety, culture, governance, quality and geology have increased as a major focus by the licensee since June, 2007.

As described in today's presentation, CNSC staff continues to discuss these items with the licensee and has reinforced the need to resolve them as the projects proceeds through Phase 1 and potentially on.

The Commission can expect the issues of safety, culture, governance, quality and geology will be fundamentally resolved or addressed prior to staff recommending Phase 2 and 3 to proceed. As described in Commission member document 07-H21 and 07-H21.A, CNSC staff recommends that environmental assessment pursuant to the *Canadian Environmental Assessment Act* is not required. This finding was also described to the Commission in CMD 06-M58 which was a significant development report 2006-9.

Staff recommends that the applicant is qualified to carry on Phase 1 activities that the license will authorize and the applicant will make adequate provision in carrying on those activities for the protection of the environment, the health and safety of persons and for the maintenance of national security and

international obligations.

The staff recommends that the Commission revise license conditions Roman Numeral IV(C) and IV(D), condition 1.5, condition 5.4, the Appendix B reference documents, Appendix D, note 3, Appendix D, note 5 and Appendix F, condition 10.

CNSC staff recommends that the Commission accept the concept of the four phased remediation plan. And that Commission approval be required for at least for remediation Phases 2 and 3. Staff recommends that the Commission approve staff's plan to ensure that the appropriate revisions to the preliminary decommissioning plan update and financial commitment will be put in place by January 1st, 2008, the coming into effect day of this amended license.

And finally staff recommends that the Commission amend the proposed Cigar Lake Uranium Mine construction license, UMCL Mine Cigar 01/2009 for a two year term, effective January 1st, 2008 with the recommended amendments and conditions. It is also noted that if the Commission wishes the amended license to be in place before December 31st that the current license would have to be revoked.

Thank you and now I turn this back to Mr. Howden.

MR. HOWDEN: Thank you. Barclay Howden speaking. Thank you Mr. Langdon. This completes the CNSC staff presentation and we are available to respond to questions.

THE CHAIRPERSON: Thank you very much.

The Commission first would like to acknowledge the members of the team that's in Saskatoon which represents the Saskatchewan Government. So I wonder if we could have a flip on to Saskatchewan and note that you're here because we want you to be available if there's questions from the Commission on the regulatory oversight that is shared between the CNSC and the staff of the Saskatchewan Government.

The second is that the Commission has decided to proceed right now with the Interveners and to hold its questioning until after the three interventions have taken place.

So on that basis, then, I'm very pleased to welcome representatives from the Northern Saskatchewan Environmental Quality Committee who have continued to support the Commission's hearings in terms of providing your information and insight so we'd like to thank you again for coming here. And so this is outlined in 07-H21.2 and I believe that Mr. McDonald is with us today and Mr. McDonald, the floor is yours, sir.

07-H21.2
Oral presentation by
Northern Saskatchewan
Environmental Quality
Committee

MR. MCDONALD: Good morning, President Keen, members of the Commission.

My name is Mervin McDonald. I live in Stone Rapids, Saskatchewan. I am here today to present on behalf of the Northern Saskatchewan Environmental Quality Committee. The Cigar Lake project has experienced some problems. A flood in Shaft No. 2 and later a flooding of the underground mines have caused delays.

The effect of these delays extends beyond the Cigar Lake operation to McLean Lake and Rabbit Lake where I work. Cameco has talked to Northerners about the problems at the Cigar Lake. In fact, representatives from EQC were invited to Cigar Lake shortly after the flood. At that time the mine manager sat down and explained the situation to us.

Later on the other co-chairs of EQC and I listened in on the conference calls where Cameco made the findings of the investigation public. After the call the mine manager and a member of corporate office staff

provided an opportunity for us to ask questions.

Since then we visited Cigar Lake for the provincial license extension and we were provided an update by CNSC staff and Cameco at the Rabbit Lake site visit. The problems at Cigar Lake were not expected because of this fixing. The problem is step by step process.

This means that each piece of work will need to be tested before moving on to the next piece. We were happy to learn of the hold point that have been agreed upon by Cameco and the CNSC staff to ensure that work does not proceed before all of the pieces are in place.

It will also be important to learn from each step of the work before designing and moving on to the next step of mediation. For these reasons we would like to see license amendment extended to at least three years. We want to make sure that Cameco has time to carefully design the next step and that CNSC staff has an opportunity to carefully review the next step before moving forward.

It is important that the job is done well. For Cigar Lake to be successful operation Cameco will need to do an excellent job at recovering the underground mine and making sure that it is safe for the miners to go to

work. It will be important for Cameco to make Northern people aware of what is going on at the site and how the work is progressing.

It is also important for CNSC staff and other regulators to tell Notherners what is going on. We would like to hear from the CNSC staff when important steps of the remediation program has been approved. Also we would like to see Section 7.3 and 7.4 of the license amended to encourage the CNSC staff to tell Northerners in a meaningful way when environmental and radiation reports have been received and accepted.

In a different area, we would like Point 2.2 of their draft license amended to ensure that all drill holes no longer in use are sealed or grouted. The EQC support the Cigar Lake license amendment in principle. We would like the changes we have suggested to be incorporated into the final version.

It is important that both Cameco and the regulators work with the residents of Northern Saskatchewan to make sure people are well informed of what is going on in our backyards. Thank you.

THE CHAIRPERSON: Thank you very much, Mr. McDonald. What I'll do is go through the next two interveners and then we'll have it open for questions for all of us, so if you could be ready for questions I'm sure

they're going to be coming from the Commission.

I'd like, then, to move to the next submission which is an oral presentation by Dr. James Penna, outlined in CMD 07-H21.4, and Dr. Penna is with us, I believe, by video conference from Saskatoon.

Welcome, sir. And the floor is yours.

07-H21.4
Oral presentation
by James V. Penna

MR. PENNA: Thank you. I'm Jim Penna, concerned citizen from Saskatoon, a member of the Inner Church Uranium Committee Educational Cooperative.

In my oral presentation, I will elaborate on some points that I made in my written submission which you've already had an opportunity to look at.

The first point is regarding procedures here.

Submissions from CNSC Staff and Cameco Corporation for the Commission's hearing on the licence amendments were made available after August 31st 2007 and this only available on request.

Next, public response was to be submitted by October the 2nd one month later. Then the CNSC

Supplementary CMD was due October the 25th 2007 and this was made available shortly thereafter.

The timeline and availability of documentation for appropriate study and response by the public is unfair. There is no real opportunity or mechanism for independent, scientific examination of the applicant's proposal and CNSC recommendations.

Now, this is not to suggest bad faith or inability on the part of the CNSC staff but, clearly, they are too heavily reliant on Cameco reporting and are placed in a very reactive position. And I would just say, in listening to the presentations this morning, it just reinforces this point.

I did not see the real, significant points made by the CNSC staff other than already repeating what Cameco had already stated in general terms. They're going to be there, monitoring and seeing that things had happened as they -- you know, as they progressed, but I mean, this is not an objective, forward-looking, critical analysis of what is happening. This is a collaborative process, it seems to me.

Whereas CNSC received submissions by the 2nd of October, the public had only a few days to study and respond to the supplementary materials. And, at the risk of imputing motives, it would seem that the limited

opportunity given for public examination reveals a deliberate attempt to cut off public input. It certainly places the public at a distinct disadvantage.

Second, regarding public consultations by the applicants, the limited, not to mention manipulative nature of public consultations, are such that they do not allow for the wider public to understand adequately what is happening and to make an informed decision about projects and evaluations such as Cigar Lake.

To claim the consultations were held with the affected communities distorts the reality of what has taken place. Local communities and surrounding environment will bear the immediate impact, but the full consequences are broader. It impacts all of Saskatchewan, indeed far beyond the province. We are interdependent; what impacts the north impacts us and what impacts Saskatchewan impacts Canada and vice versa, and likewise the whole world. Releases of emission travel far and wide, causing a cumulative amount of radio nuclide contamination in an ever widening area.

For example, this happened -- is happening right now, even with the faulty Key Lake tailings management facilities. I don’t know if those have been corrected.

The containment of Cigar Lake contaminated

waters sand and slime presents any number of unknown hazards or problems, and when you talk about water treatment I did not hear how, exactly this treatment is going to take place.

How do they effectively treat that volume of water, all the sand and all the slime that is in those tunnels?

Because of the narrow focus and limited public reach of so-called consultations, the wider public is kept in the dark about the real issues surrounding mining uranium under Cigar Lake.

My third point -- well, back to the point that I make in my presentation or written presentation; the problem of unknowns.

In a supplementary statement I find no mention of unknowns as such. They use other -- a more sophisticated spin, but it’s still -- there are many unknowns and there is no mention, though, of unknowns as such by either Cameco or the CNSC staff, unknowns which were admitted in both the original Cameco application and the CNSC staff recommendations.

A comment here, according to Socrates, the beginning of wisdom is when we realize that we know that we don’t know. So one has to commend both Cameco and CNSC staff for their original admission of unknowns and -- but

the fullness of wisdom, however, brings with it the moral imperative that one should not act in a state of ignorance. And I would invoke the precautionary principle, here.

In the supplementary submission, however, here is no admission of unknowns. Rather, a stage program for proceeding as proposed. The truth is the same unknowns are still present. There is still trial and error going on. This should dictate a halt to activity and trigger a complete re-examination of the project which has essentially changed.

From a moral point of view, it becomes even more unacceptable to not acknowledge that one does not know and yet be willing to act in such a state of unknowing.

Granting an indefinite license and, indeed, even a two-year renewal licence for the Cigar Lake project in such circumstances is unacceptable. It appears to me that there is nothing new in a supplementary recommendation despite the change that the license only be renewed for two years. The nature of the flooding with slime and sand in an underground environment, which must be kept frozen below Cigar Lake, significantly changes the whole project.

There are so many unknowns that further

dangers and accidents may well happen, putting in jeopardy not only the environment but the heath and safety of workers.

Again, given the unknowns, it is unwise and unethical to proceed on this trial and error basis. Hold points become just another element of the trial and error basis. Therefore, to grant any licences to Cameco is unacceptable given the unknowns; the essential changes, and the threats to the environment.

Now, I understand that it is your mandate to guarantee that nuclear developments proceed under the condition that they meet all regulatory standards. It is quite obvious that nuclear developments are proceeding and, as revealed in news releases about the internal activities at CNSC, they are proceeding with private meetings between CNSC and corporate executives at least 60 days prior to hearings. This certainly is questionable and does not give the appearance of objectivity nor does it generate public confidence.

And to add insult to injury, Canadian standards for levels of protection from ionizing radiation are not set by the Commission, as far as I understand. The standards at a minimum are in contention and, indeed, even obsolete because of more up to date scientific studies and information, for example, from the Beer 7

reports and the European Commission on radiation risk, just to name two prominent ones.

Establishing standards seems to be outside your jurisdiction, if I understand correctly. You apply them, you make sure that they're followed, but we're wondering what are the standards and how do we evaluate the standards that are operating? Are they current, and do they really protect the public.

So nuclear safety becomes a relative matter, relative to obsolete standards, beyond your control

In short, the Canadian Nuclear Safety Commission is dealing with the question of how to proceed with the Cigar Lake project. The question that you are not addressing is whether the Cigar Lake project should proceed.

If Cameco did, in fact, comparably fail as evidenced by their own admission, and if your severe reprimand at the June 21st meeting means anything, Cameco should not only be prohibited from proceeding but they should also be penalized.

Now, I want to add a little comment here which I hadn't prepared, but listening to the conversation here this morning, listening to all the admissions of the changes that had to take place and the proclamation that

there is real care and the core values and all this sort of language that we used, you know, is belied by the fact that they had to make significant changes in their proposals.

So how can you trust a company that is -- world class as it's supposed to be -- and it has to come in here and tell you, you know, first admit that they made mistakes and now they're telling you, "We've made all these changes"? Well, where were they before?

I don't -- I just don't understand this. Is it within your power to penalize these people? If so what is stopping you from exercising this power? And if not, the work of the CNSC is a charade and the industry will continue to mis-manage with impunity, risking human lives and contaminating the environment.

Thank you.

THE CHAIRPERSON: Thank you very much, Dr. Penna, for joining us today. And we would like you to be available for questions when the Commission is ready for the question period, sir.

We're now, then, going to move to the next submission. To note this is a submission, 07-H21.3 that was originally scheduled as an oral presentation from Eleanor Knight. Ms. Knight is not able to attend today and so her submission will be considered as a written

submission and the Commission will be able to ask questions or make comments on it at the question period.

So with this -- with the presentations from the licensee, the presentation from CNSC staff and related CMD's and the three interventions, two oral and one written, the floor is now open for questions from the Commission members. And I'd like actually to start with Dr. McDill.

DR. MCDILL: Thank you.

Two questions for this first round. In 6.3 of 21.1A with respect to Cameco's examination of cultural systemic barriers that will inheed -- inhibit or impede effectiveness of corrective actions it's very difficult when you're in the system to identify systemic barriers. And it's very difficult when you're outside the system to work with people in the system to identify systemic barriers.

So my question is, I guess to Cameco first and then to staff, how is this going to proceed successfully because I think everything going forward requires that the safety culture go from the top to the very bottom and through the third parties as well.

MR. GITZEL: Thank you. Tim Gitzel for the record.

You know we've looked hard at that as well

and in our June 21st meeting here I think we recognized and the point was made very clearly that it's not just at Cigar Lake that we need to be looking at Cameco that it's across the company and we've done that.

We know that a strong safety culture is really the -- it's the product or the result of what you do and that in our case we've looked at all the systems from top to bottom. We've been engaged -- Mr. Grandy himself has taken the lead on this to look at the systems, to look at the people in place, to look at the accountabilities of the people.

And really we've done a top to bottom revision of our company, of the organization of our company, of some of the programs. And so we understand that there are systematic barriers to improvement. We're trying to identify them throughout the organization and remove them so that we can move ahead.

I'll ask Bob Steane to give some more specific details.

MR. STEANE: Bob Steane for the record.

I think the -- picking up on your point about in the system, out of the system and we recognize that we do need a view from outside of Cameco and to that end we have an organizational specialist/consultant advising us and steering us in our organizational

redesign. And that is very much taking us down the path of -- that -- of the identification and articulation of clear accountabilities.

And the change comes about by recognizing clear accountabilities and then changing what it is that you do. And so we also have a strong belief that the change of culture will come about by repeated changing, actually changing what it is that we do day to day and how we do it and keep reinforcing those changes until they are habits. That is form new habits.

And it is through that mechanism which we have the external view helping us with our self-assessment.

DR. MCDILL: Thank you. Staff -- I'll come back on a point in a moment.

MR. HOWDEN: Thank you. Barclay Howden speaking.

I'd just like to set the context for our reply. As you're aware we're still within Phase 1 and going towards Phase 2. And Cameco in dealing with their governance, quality, culture and geology issues has submitted a number of documents which we've outlined the status of review on 07-H21.A, page 5 and we have had an initial review of a response that they provided on safety culture.

So we're -- we haven't fully completed the review because we're expecting follow-up but in terms of from a generic standpoint from barriers that could be posed, I'm going to ask the Director responsible for this area, Mr. Andre Bouchard to provide a comment on that.

MR. BOUCHARD: Andre Bouchard, Director of Human and Organization Performance Division for the record.

What we will -- what CNSC will monitor or look at is really changed behaviour and that takes time. And what our work within it will be is really to go through steps by steps. And notice the increment into a solidification or a change in their behaviours and as was raised before what we would look for is permanent marks of improvement.

And -- so the process takes time. We have communicated to Cameco that as was raised earlier in the comments a consultant will be hired or a firm of consultants will be hired. And they will do a self-assessment. We will also pay attention to this effort and monitor it closely.

DR. MCDILL: Thank you. There is no timeline given for any of these things because of the nature of the mine recovery. But if the consultant is coming in in the first quarter of 2008 as is indicated

presumably it will take some time for the reports to come out.

Where will Phase 2 be as these reports are coming in? I mean is there any sense of how these -- how the mine recovery is going to fit in with the cultural assessment and working together because they need to be done in tandem. And we don't have a timeline or I don't have a timeline.

MR. STEANE: Bob Steane for the record.

I will -- John Takala can provide some of the more detailed background on that. But I think there are a couple of consultants. One is that we are doing -- the consultant that we're talking about coming in first quarter next year is to do an assessment of where we are. That is a review and report back on where is our safety culture.

We also have employed now have engaged -- have had engaged for a good part of this year the organizational consultant, organizational specialist who is working with us and helping us in operations group at reorganizing, relining and resetting the organization group. So we will be getting our first independent outlook at where are we. And that's planned for the first quarter.

But perhaps I'll get John Takala to give a

little more information on that.

MR. TAKALA: John Takala for the record.

Yes, with -- the first stage as I mentioned was the re-organizational look. With that work complete -- or completing we'll move to the safety culture assessment in the first quarter of 2008. And the report would be available in that timeframe.

And we recognize the independent -- independence issue team will have people from outside the company with industry experience to give that fresh look to things along with some people outside of the mining division within Cameco to help give that inside perspective. So we see a mix in the assessment team led by a safety culture consultant. Thank you.

DR. MCDILL: Does staff have any comment on that?

MR. HOWDEN: Barclay Howden speaking.

Without -- just to touch on the license term because that's just about the only termporal thing that has been put forward I'd just like to, within that context speak that the original presentation that was our recommendation to you was an indefinite license term activity based. The revised one is two years but it's still activity based.

And if you recall back in June in front of

the Commission Mr. Gitzel had spoken about Cameco's commitment to fix the issues before they came back. And that basically in our view means revamp the programs, implement them, validate or audit them, and then we can do a CNSC verification on it.

In terms of planning going forward, hold points are being proposed and we're reviewing them and there's many -- lots of criteria within those.

We would only be looking at criteria from a regulatory standpoint because there's going to be other criteria within that.

What the intent is as we go forward, is that Mr. Scissons' team meets on a regular basis with Cameco to basically see how much progress is made -- sort of look where the next steps are going and then starting to put together a more detailed plan for timing because timing does become important as one of our recommendations that Phase Two/Three comes back to the Commission for approval. So you have to plan in a hearing at that particular point in time.

So timing is important in terms of planning work but I still like to emphasize that we're very focussed on an activity-based project and when it's ready, it's ready. And from our perspective, putting false timelines is not a good idea but I think putting realistic

timelines is, and I see those coming forward in the new year after you have rendered a decision on this licence.

Thank you.

THE CHAIRPERSON: Dr. McDill, I think that you've touched -- your first question has touched such an important point which is the follow-up area from our earlier meeting with Cameco, that I wonder if you would agree that we would open it to the other Members on specifically this issue before we go on to other matters.

If you agree to that then I'd ask other Members if they have specific questions on this matter which is the fundamental changes in safety culture as we move forward.

Any other Members wish to ask questions on this? Dr. Graham.

DR. GRAHAM: Thank you, Madame Chair.

Yes, as a follow up, I guess my concern is and this is not the first time that officials from Cigar Lake have been before us on many different occasions and every time there's a commitment with a new team -- not every time there's been a new team but now there's a new team with experiencing hurdles that you're going to go forward with and so on and we had -- we heard a lot about that back at the review time in June.

But new team and the ability to address the

seriousness of what's happened. Every time you're saying there's going to be improvements. Every time we hear those words of improvements we think, well, what did the last meeting mean when you said that you were there and you were going to go forward?

Today, you've come forward with a new team and you say you have a clear plan. What assurances, I guess, can you give us, not only the Commission, but the general public to the fact that now you are at the position that you can assure the safety of the workers, the safety to the environment that -- and meet the criteria of what CNSC represents in the protection of those aspects that weren't there before, and I still don't have that feeling even though you've got a tremendously strong team as you pointed out this morning.

Two years ago when you came before us you had a team that -- you had everything was going forward and going forward in a very positive way. There's been negatives and so on and then this flooding has certainly been a major, major concern not only to the people that invest in CAMECO but more importantly to the general public and the safety of workers, the environment and the EQC and all of the other stakeholders.

So today what is really that much different than what was two years ago or four years ago or when you

have come forward with developments of Cigar Lake at the initial stages?

MR. GITZEL: Tim Gitzel for the record.

Sir, we've really focussed -- I can speak for the last months, at least last year, on four areas. That would be governance and oversight and so you see some of the changes regarding the governance. Our organizational structure has been changed. We've changed some people. Those are necessary changes we thought we needed to make.

We focussed on geotechnical. I think in our presentation we showed some of the areas we're focussing on, putting more emphasis on geology, on engineering, bringing more experts into the house.

We focussed on our quality and management systems, especially the use of risk assessments, understanding the risks; job hazard analysis work done before any work is undertaken.

And then the last one I say is safety culture, but I think that's really a product -- again, I said that earlier -- of getting the other ones right.

And so you're right to ask "Well, how do we know you're making progress or you've made progress or you're getting anywhere", and I think there's probably two ways to do it.

First, would be to audit and observe and we have to do that first ourselves, internally. We have to put the programs in place. We have to verify them and validate them and audit them by ourselves and then by third parties -- have third parties, and only then should we be looking to the CNSC and the regulators to look at them and audit them themselves.

Secondly, we can do field observations. We do that both ourselves and through others. We have measurements through what we call KPIs, Key Performance Indicators, lost time accident statistics; the more traditional way of doing it.

And then what Mr. Steane talked about earlier, doing surveys, safety culture surveys. Perception base, you ask people. You go in and say -- ask them what they think of the safety culture. And so those are things we have to bring forward.

That’s our process. That’s been our focus to date, and I say again we have more work to do but that is the way we think we will move forward and coming back to you with evidence -- hard evidence of our progress and earning back the trust in CAMECO.

DR. GRAHAM: Yes, because that trust is -- has been weakened because of the fact that two years ago or when you came initially for the development of the mine

we were told you were there then. You had all of the checks and balances, all the safety issues were going to be dealt with, and so on.

Today, you've given us four phases or not phases but four main themes that you're going to be focussing on. We know from what the presentation in June was that one of the major failures was the geotechnical. Information that you had wasn't good enough but, again, two years ago we were told it was all there.

So what my point I'd like to make is confidence is very, very fragile and that confidence is that the demonstration of going forward there can be no rush as to develop something and develop this phase; finish phase one, go to phase two, phase three.

Well, time is not of the essence. Time is going to be required to make sure that you do everything right because it's going to be very difficult to make a good impression if this fails again. And if it fails to the detriment of the environment or if it fails to the detriment of the safety of workers then the whole reputation of the company is going to be tarnished even more than what it is now because there is tarnish there of the concern of where we're going.

So the only point I'd like to follow up on is the fact that we heard this morning that the culture

has changed, it’s improved; 27 new staff members, and so on and so on.

Two years ago we heard the culture had changed and we were there then. And I just need the assurance that we’re at that point now that you can go forward and meet those four criteria that you’ve said that were weak at the time of or prior to today’s hearing.

MR. GITZEL: Sir, as I did in June, all I can do is give you my commitment that we will do that, that we are focussing on those areas. And I think that I can speak for Mr. Grandy as well that our focus is clearly on those areas.

We have seen progress in the past months on the areas I outlined and we understand now that our -- we’re into our line of credit and we have to come back -- the reason for the regulator hold points, we have to come back. Before we move from one step to the next, now it requires that we prove, give evidence that we have made progress on the areas we said we would.

And we understand that that’s now the way to operate going forward and we can’t progress until there is comfort from the regulators and our stakeholders who are in the room that we have met the commitments we made. We understand that’s the process. That is going to take time; we understand that as well.

MEMBER GRAHAM: Just one other point, Madam Chair, and that is, I'm wondering is it prudent to put timelines on when you're going to be back in production? Does that then preclude the fact that safety may be shorted and the safety culture may be short-changed in some way or the protection of the environment may be short-changed?

Is it prudent to put a date because there have been dates out there of when Cigar Lake would be back to production? Are those carved in stone or are those just preliminary estimates that you're working towards to try and meet that, those deadlines, but not necessarily the fact that you're going to short any –- take any shortcuts that would be detrimental?

MR. GITZEL: Sir, I can assure you we will not be taking shortcuts at Cigar Lake going forward. If you happen to read our quarterly report that we put out yesterday, we made significant mention of Cigar Lake and where we're at with the project. And with respect to the timing, we said that Cigar Lake, we estimated, could be -- could be back in production in 2011 "at the earliest" are the words used.

And then we put the list of conditions in and there's a half a page of them, that would have to be fulfilled for that to take place and that's doing exactly

what we're talking about, living up to our commitments, all the approvals necessary, taking the right steps.

So we're not fixed to any time. We know we have to do it right. Shareholders, some people are looking for guidance and we say this date at the earliest, but it's subject to the many caveats and conditions we've put in the quarterly report.

THE CHAIRPERSON: As a follow up to Mr. Graham's question, I would actually like to hear directly from Mr. Steane and from Mr. Jarrell who have been with the company for some time, and Mr. Steane is in a new role now.

But I'd like Mr. Jarrell to come up please to a microphone and I would like to hear from you individually as to from a Vice-President, both of you have significant responsibilities on this, on taking forward this program and we'd like to hear from you directly as to your views of what Mr. Graham said and what your part is in this.

MR. STEANE: Bob Steane for the record.

Yes, we fully know that the trust needs to be earned back one step at a time. We have implemented and some ask what's changed, what's different today, and that was very much what Mr. Graham is asking.

I think from my perspective, what's

different today is that the hold points that we have put in, we have outlined and gone in and developed our plan based upon actions that need to be done. We have assessed what the risks are.

So we have looked at the risks associated with the actions and then put in place what are the –- all the mitigating actions that we need to have in place before we go forward and that’s reflected from the better understanding of the geological setting of all the risks around that, the better understanding of the interface and behaviours of people in going through in that challenging environment and what we’re doing.

We’ve gone through that risk assessment process, identified this has to be in place before we can go forward and we have put in all of our documents, all of our planning, all of our thinking, very hard stop points. So that until those activities are done, verified that they’re done, and in place, we don’t go forward.

We have very much an activity-based process and that was also behind the setback and said we need to assure success. We also recognize that a future failure is not an option and the only way to go forward is with doing everything to be assured of success prior to starting the activity and that is, from my perspective, a big change and a big difference.

So we're not timeline driven. We are activity driven and activities not until we're ready to do them.

THE CHAIRPERSON: But, Mr. Steane, my question is for you, for you as a leader of this organization, what are you doing or saying? What have you seen in looking at the safety culture of this organization?

And what can you say to the Commission, to the intervenors that are here today and members of the public that are listening, what can you say that is –- let me put it bluntly, from the heart and from the soul about what you were going to do to show that leadership that makes a difference?

What is your vision of safety culture performance that is going to make you sleep at night knowing that you're in charge of this? Not the activities and all the experts and putting this in place and I realize all that's important, but I want to hear that from you and I want to hear that from Mr. Jarrell.

MR. STEANE: For the record, Bob Steane.

I have taken a very active role in Cigar Lake. I go to the site often. I talk with people. I'm stressing the assurance of success, stressing with employees in all my conversations with them that we are

going to do this when we're ready to do it. We are not going to be pushed by timelines.

We're going to be pushed by making sure that we are ready and we know what we're doing before we do it. And I do that, I've been doing that often and I'm very –- I say, meeting with employees. I've been meeting with employees and putting forward this whole philosophy of assurance of successes.

What I am doing, what I look for is –- I'm very pleased. I go to the sites and people –- and I support and get out there, that they are doing their job hazard analysis, that before they start to do some work and look for evidence of and talk with people as to how they are doing it, what are they doing, what are they about to do, and I'm watching them, observing them.

They have these meetings. They look at the next activity. They huddle as a team. They talk about it, and then implement it.

And I think the leadership that I show or bring to it is being there and showing that this is important to me.

THE CHAIRPERSON: Are employees, are there surfacing issues that they feel are important that you need to know or are they ready to do that with you as a Vice-President or is it still a very hierarchal

organization?

Are they telling you thing that are –- do they feel open and ready to tell you what are some of their concerns or some of their issues or some of their questions?

MR. STEANE: Bob Steane for the record.

I talk with employees, all employees, and they –- my sense is they are very open and I also find that the Cigar Lake people are very open and willing to talk about what is happening, what they're doing, and the things that they need to be successful.

THE CHAIRPERSON: Mr. Jarrell?

MR. JARRELL: Yes, John Jarrell for the record.

I've worked for this company and its predecessor for 29 years in a variety of roles and operations in environmental assessment, regulatory affairs, and the like. With this re-organization, an additional task I've been given, and in fact one of my key tasks, is the effectiveness of the management systems that we have in place.

The observations that we've made in terms of changing safety culture which is, as Mr. Gitzel said, I think viewed largely as an outcome, is to focus on risk assessment and improve risk assessment perhaps will be put

best as a more conservative decision making in what we do.

We always have done risk assessment, but I mean one of the clear things that's come out of the various events at Cigar Lake is the need for a more conservative approach to that risk assessment. We want to encourage that.

The other area, as has been highlighted, is the area of procedural compliance and effectiveness. We have procedures. One of the tasks that I see before me is this, this sort of trying to bring additional emphasis to the systems as one, focus on effectiveness and compliance.

We have had some successes along the way. The ones that we talk about internally largely are codes of practice that are sort of the typical way that we control radiation protection. We implemented such a system for ventilation as well.

This is really taking a system and bringing it down to work constructions where it's clearly deliverable goods and the focus that I see for myself going forward is to just to try to promote that effectiveness of these procedural activities.

I guess the other large thing that Mr. Gitzel pointed on was sort of a return to sort of core activity, to really sort of focus at some of the initiatives we have and focus on those that are critical

for the well running of our operation.

So you ask me what my role is going forward and how I would implement safety culture, I think it's, as I said, on the effective use of these management systems.

THE CHAIRPERSON: But Mr. Jarrell, you must have -- you were there with McArthur; you have a role throughout the whole company. You've got to see what's happened there. There must have been some thinking yourself too about this.

You have been a major collocutor with the regulatory agencies in terms of what our mandate is, and I know the mandates are of Saskatchewan.

I guess to take Mr. Graham's question, what has changed for you in what is an extremely key role for us because, as Mr. Graham said, you are a major licensee of us, not here but in other places as well, and what has changed for you?

MR. JARRELL: John Jarrell, for the record.

THE CHAIRPERSON: And I don't mean procedures.

MR. JARRELL: I think really that the test will be, and what's changed I think is largely through this corrective action program, I think it's that internal verification. It's no longer an assumption that things are as we expect, that there actually has to be this very

sober second thought before we proceed onto various issues.

So what I see is a more engaged workforce in terms of a risk assessment. And I think really in order to develop that -- re-develop that confidence, I think there has to be, and the expectation is that we will put quite a bit more effort into actually evaluating the fact that we reached our goals before we proceed ahead, and those things are independently audited.

What we've tried to do is structure this CAPIP program, if you will, to try to deliver that.

THE CHAIRPERSON: Dr. Penna, one of the answers to one of your queries, which is a very significant and important query, is the independence of the CNSC staff from the company and the role of the CNSC staff in this area.

In Canada and through the *Nuclear Safety and Control Act* and through the regulatory philosophy, the company, the licensee is held absolutely accountable for the safety and security of the sites that they are involved with.

The management of Cameco is held under the *Nuclear Safety and Control Act* and other Canadian laws totally accountable for what they do. That doesn't negate the fact that the CNSC is charged with an oversight

responsibility as Saskatchewan.

But I think that any regulator in the world that says that they are able to be on the hundred percent there every moment is not telling the truth. The truth is that regulators direct through the Commission what are the activities of Cameco, that monitor what those activities are, and does everything in its ability to ensure that they perform according to what Canadian citizens expect them to do.

But it is absolutely essential that the Commission holds the company absolutely accountable for what they put forward themselves. They aren't able to say that the regulator should have caught this, or the regulator should have specified something else. The company is expected to have a culture itself, which is above regulatory standards.

The idea that the regulatory standards are an idea of excellence in mining, excellence in uranium mining is not acceptable. It's not acceptable for any company, much less the largest company in the world -- mining uranium company in the world.

So the staff by absolute necessity needs to interact with the company, to hold them accountable and to offer us, as the Commission, and you, as a Canadian citizen, and the EQC, as people that are implicated both

as holders of the land and also workers in this, as what are they doing to ensure that they are meeting those standards of quality.

We're going to break right now and come back to this subject with my colleagues onto safety culture, but we'll just take a 10-minute break.

Thank you.

--- Upon recessing at 10:27 a.m. /

L'audience est suspendue à 9h27

--- Upon resuming at 10:39 a.m. /

L'audience est reprise à 10h39

THE CHAIRPERSON: We are on the subject of safety culture and so I will turn to my Commission Members, the remaining Commission Members, for any comments or questions that they have on this topic.

Dr. Barnes, do you have any questions.

MEMBER BARNES: Well, and if I could just broaden it beyond the specifics where Dr. McDill started referring to the particular section.

We are here today to look at the application by Cameco for a uranium mine construction licence, and as part of the criteria, Cameco has to show that they are capable of doing this.

A broader question which kind of builds on what we've discussed before the break to me is the

capability of Cameco to demonstrate to the Commission that they are capable of doing this, not just in a matter of words.

What I'm amazed at in this document before us today, the binder with many CMDs in it, is that there is not a single diagram, neither from staff nor Cameco.

Here we're looking at a -- apart from the PowerPoint presentations, in the formal documentation that's given to us, there is not, as far as I know, apart from the odd table, there is not a single document.

We're looking at a subsurface problem here which Cameco is engaged in Phase 1 of trying to fix. There are a series of geotechnical holes, large holes for the pumps and so on, and so on.

There is not one diagram that refers to the site map. There is not one diagram, even though the application look-ahead is based on activities. There is no plan of work or a sort of a subdued Gant Chart that would put these in a graphical sense so that one could see the relationship of the components of the plan at work, apart from Phase 1, Phase 2, Phase 3, Phase 4, which have no defined time at all. And therefore, we cannot see how Phase 1, Phase 2, Phase 3, Phase 4 fit within the proposed two-year term.

Again, it was almost incredulous for the

licensee to ask for an indefinite licence. I understand that you are quite happy to go with a two-year licence now, but it's difficult for me in the documentation to see what will be achieved within the two-year period that we're licensing you for.

And staff, take your one, two, three, four phases and suggest that two and three were largely, you agreed in your own presentation, Cameco, that two and three would be sort of done together, blended if you like.

But again, why wouldn't we see a set of these activities so that we can see what is dependent on what, so that when we have a mid-time report, or when we come back in another two years if the term of two years is approved, if the whole licensing is approved, then we have something to, in a sense, measure the company against. What we have in this document is a set of generalities.

Another fundamental issue is from June is that you said that you, as a company, you have got the message and you've hired a lot of new people. You've reorganized the company. In respect to this issue that we're looking at here, where is there an organizational chart?

There is no organizational chart in this document to show the responsibilities, show who is responsible for what. So, when we talk about a safety

culture, who is delivering that? An accountability. Who is responsible to whom in this organization, all right? If you've shaken up the -- and reorganized it.

If you added a whole lot of geoscientists, for example, you know, why not have a subset diagram showing that what are on staff, who are the consultants, who are they responding to. And then, one could see that that relationship -- whether that was adequate, to then look at the plan of work. All right? To see whether you have the appropriate skills to ensure that that plan of work follows sequentially.

I understand and I fully appreciate that you cannot put, on the top of your Gant Chart, you know, precise timelines and -- but at least, one could have the plan of work without specific timelines, or at least, general timelines to say a year rather than putting months in there.

So I just find that this process that we're engaged in today is extremely disappointing, to the point where I would suggest that Cameco has to consider hiring consultant or staff people in the area of communications, right? Not just to your many stakeholders, but this is a document that comes to the regulator and I think you're not communicating the concerns, so the issue of safety culture that was just addressed right at the beginning,

the document does not adequately address that and I think that President Keen's comments were essentially asking, at the vice-president level, how are you demonstrating that.

And it has to go beyond words, right? It has to be -- there has to be procedures; has to be a structure in order for us to see that this --what you're claiming to be able to do, right, in a kind of reformed, corporate sense, to get past this very, very serious problem, you have to demonstrate that.

And I just don't believe that your documents submitted today are adequate enough to clearly demonstrate to the Commission, let alone the public, that you've done that. And therefore it raises a doubt in my mind, if you cannot communicate that in a document of this nature to the Commission or to the public, how are you able to demonstrate that internally within the company?

All right? Where are your, sort of, simple diagrams, or whatever, to show to the staff that you've reorganized -- that this is the way in which they should be behaving? This is the accountability.

But you certainly haven't shown that in these documents today.

And I think, then, the staff's documents also are again, lacking diagrams and that sort of thing.

So, that's my general comment. So I don't

have any comment to Cameco to those points.

MR. GITZEL: Tim Gitzel for the record.

Dr. Barnes, let me assure you that we do have all of that information -- Gant Charts showing our estimated timelines for the next steps in the process. Detailed org. charts -- I've just finished preparing what we call a Play Book in operations, that has all of the org. charts set out. It has a team charter for our operations division. It has all of the job responsibilities for each of the people; their accountabilities. And there are consequences for not following through.

We have that available to share with the Commission or with staff and I'll pass it -- that information does exist; it is available and I accept your comment that we should have communicated more of that to you, and that's what we'll have to do too, as I said before, give evidence that we're moving forward and we're progressing on these matters.

MR. STEANE: For the record, Bob Steane.

I think, Dr. Barnes, that some of the information that you're looking for and I agree needs to be there before the next step is taken is the very thing that we are working on. So, to -- we -- the Phase Two work, which is the dewatering the mine and moving forward

with the plans and so on, that is, today, before we do this, we don't have those detailed plans but when we do come and we do recognize that we need to be with the Commission, before the Commission with the detailed work plans of how all of this will fit together, until we have it ourselves that putting it forward is not -- we're not in a position to do so.

We have what try to outline here is where we are in the process of doing that.

We are questioning many, many aspects, or all aspects of the mine. The mine plan, how people work, how all this goes together but all of this frankly is coming together and probably in the next two, three, four months, with a lot of this technical work will be coming to fruition, a lot of the procedures and practices will be further enhanced as to where we are and what's going on. And at that point, when we come before you -- when we're ready to come, when we're ready to know what we're doing and appear before you with the Phase Two and Phase Three, then we will have all those plans that -- we'll have all that information that you're seeking.

THE CHAIRPERSON: But Mr. Steane, let me be straight about this.

You are -- you have said that you are moving ahead on mediation and construction at the same

time as you are handling the changes in the culture that are necessary to change the -- what I said was the root cause of this.

So what you're lapsing into, again, is a technical discussion of the construction. What I think is pretty important here, is what we haven't heard is, you know, when do you sort of say, whoa. When do you say, absolutely, whoa; we know that there's something really so serious about this that we've got to, as Mr. Gitzel said, you know, make the changes in governance and go out there and at the very senior levels and talk about this and hire these individuals to help us?

But I must say to you, when I listen to you, what I really fear is that there is again, this lovely drive that, as scientists and engineers, we know this. There's this drive for performance and so the lapse back into the, let's get the work done, is what I'm hearing form you, rather than -- what I'm hearing from my colleagues is that you said that there was four areas that you were working on.

And, if we hold up just one of those four areas -- and we're going to get into the geology in the other areas is that one would have said that you'd want to have communicated. One of our areas is governance and this is what we're doing, and this is actually how we're

doing it, in terms of outcomes. How we're holding people accountable, and this is the clarity of roles and the clarity of outcomes that we're expecting, which Mr. Gitzel says exists, which is fine.

The second is, safety culture, knowing that it's going to take time, that it's going to be doing. Exactly where is the thermometer going to go in that says to you that it -- there's enough progress for you to move to construction.

For example, we talked -- when you came before us earlier, you talked about the issue of the clear direction that's given to your contractors to be there. Well then, you've said this is a -- one of your biggest problems, and you've now got more contractors, more consultants than ever on site.

To me, this is pretty clearly a risk. There is a real risk for us, as a Commission looking at this that the -- have the lessons been learned? Is the wall being built on this issue at your corporate level and through the directions that you've actually got more contractors and more consultants on site than ever before and you're now in a construction phase which is inherently got dangers on this?

So what is your risk assessment of the safety culture aspect of this that would say that we

haven’t made enough changes in this in order for us to progress in this? You know, profoundly, what is -- what we need to know is that, before you go off again into building and putting nails and bricks and, you know, all this together, that there has been enough changes at the -- that have happened, in order that we can ensure that the management of this is taking place within this new envelope of safety culture. And that’s what I don’t think we’ve heard.

So what we’re saying is, why should you be going ahead with construction, is one of the questions that a regulator has to ask, because we -- you haven’t assured us that the envelope is sufficiently rigorous to provide the assurances to us that you are qualified to do the job.

So that’s what we’re trying to give you, the opportunity to talk to, and not just by pieces of paper and -- if the piece of paper isn’t there, tell us that you are qualified in the four areas that you’ve talked about. You’ve talked about governance; and that you’re holding these people accountable.

All those four areas, and we’ll get to hydrogeology pretty soon, exactly how do we know that you are qualified to have this licence? Because that’s the -- Dr. Penna talks about, was the Commission responsible for

it? That's what we're responsible for.

It's for measuring if you are qualified to undertake this work that you are asking to do and so, sorry for the lecture, but that's how I see it right now.

Mr. Steane?

MR. STEANE: Bob Steane, for the record.

And Ms. Keene, you said -- I think that perhaps I then -- I misunderstood Dr. Barnes' question because I heard him asking for detailed plans and my mind went right to the detailed mine plans and geophysical plans and geological plans.

You said -- when do you say whoa, and stop and look? We've said that. We have said, "Whoa". That's the mode we've been in, is looking at how we structure it, how is our governance, and we've addressed that through looking at the governance of the site, the organizational chart.

Yes, there was not an organizational chart in the -- like I say, in the CMDs. We had -- and they are in the Mining Facility Licensing Manual, outlining the various positions and the changes and articulating the roles and responsibilities there. So we've done that. We're not done; we're in the process of working on that.

The other areas where we're looking at. What is it that we need to do to go forward? We have put

in place job hazard analysis and rigorous insistence that these be done. We're changing the practice of what we do and how we do work each and every day, and we think that by changing the habits and practices that manifests itself into a different safety culture.

We don't proceed with anything without doing a risk assessment. We risk assess what the activity is going to be; look for -- and then mitigate those risks that are identified and they have to be mitigated and they have to be signed off. There's also a process where they are signed off by various levels in the organization depending upon from our risk matrix, what the risk is and what the mitigation measures are, up to the general manager or some come to me. That is in place.

We have implemented daily -- every morning, every employee on site sits and talks about first and foremost, safety and environment. They are two topics that are talked about by every employee, every morning, what are they doing?

They also then -- throughout the day, there are job cards that people have and there are activity cards that -- we have the supervision working with the employees, checking on employees what they're doing, and making sure that every day the job cards are filled in, what they're about to do and then that progresses --

through the day the supervisor contact with the employees is made.

We are going forward with, and continuing, with the -- talked about the assurance of success. One of the early things that I did when I went to Cigar Lake was had meetings with all the employees and talked about how our way of going forward is the assurance of success. And not just the assurance of success of the project, it's the assurance of success of what you're about to do next. Be sure you have all the things in place before you start that job, before you drive that vehicle, before you do something. That is our mantra.

It's not schedules. It's not "needed to be done by this time". It's when it's right, when we know we can be successful, then we will do it.

Those are the things that we are doing and we're doing it daily, reinforcing it. And that's how, I think, we're seeing changes in how people do work, changes in their cultural attitude, and improving and enhancing our safety culture.

THE CHAIRPERSON: I think Dr. Barnes had a comment and then I'll turn to Monsieur Harvey before we go on to other topics.

MEMBER BARNES: Yes, I'm just going to -- if I take your last comments before President Keane made

hers, I think I heard that you might be asking for a one-year licence, and let me put it to you in this way -- and this is page 1 of your 1 of 19 submission, that's 8.21.1(a).

At the end of the first paragraph, you say:

> "However, Cameco's ongoing re-evaluation of the Cigar Lake Mine Underground Development Plan, largely triggered by the inflow investigation process, remains an outstanding item. Therefore, the information available to the CNSC staff and the Commission to assess the overall remediation and construction completion phase, is insufficient at this time. In this submission, Cameco will elaborate on the status of activities being undertaken to assist the Commission in making these deliberations."

So what we're here today for is that you're asking for a uranium mine construction licence to do certain things within a certain period; right? And we have to assess whether Cameco is capable of doing that.

All that I was trying to communicate is -- I wasn't asking for the very detailed Gant Charts. I

think I made that clear.

I say you don't have any schedule of activities in a graphical sense that one could put one's mind around to see the order, the priority, in here, and I actually haven't heard the appropriate words coming from Cameco in the discussion so far to be confident, in a sense, that you can see the hierarchical nature or the wheat from the chaff in this. All too often, I think as a present indicator, you sort of drop right down to the lower level.

So it's one thing to go and talk to the workers and every day, you know, every morning, you're focussing on that, but do you have an overall structure in place for safety culture which we were trying to address?

Same with the organization. You have hired a lot of people, but we don't see the evidence in the organizational chart.

That's all that we're saying here. That you are not showing us through this process, all right, which is a licensing process, that's why we're here today. You have not packaged the material to convince us because you start off by saying that a lot of this is essentially a whole lot of unknowns. So if we're to give you a construction licence, we need to know over what period that should be and what work you're going to conduct

satisfactorily within that period. And I would challenge it. In the Phase 1, 2, 3, 4, there is no indication of timing relative to the term of the licence here. Okay.

And the same with the organizational chart, the responsibilities. Who is -- and it's simply a matter of us as having some confidence in this at time when the confidence in the company clearly has been undermined by the processes and the response to the unfortunate flooding of the mine itself.

So I think the Commission has to be extremely careful in providing a licence, to make sure that the company has got its act together. And I am simply saying in this -- without going into our later questions, that I don't think that I've got it together in terms of this licensing process, that we'll go forward with it, beside that comment.

THE CHAIRPERSON: Monsieur Harvey has indicated to me that we can perhaps come back to this particular subject and that we'll move on to some other subjects as we move forward.

And, I guess, just a comment I'd like to make before we go on to other subjects is, when we talk about -- the staff talks about the Commission getting involved in regulatory hold points and we talk about the Commission Hearings and Commission getting involved and

whatever, the Commission itself likes to be efficient and it likes to be efficient in what it needs to do and what is clearly where the Commission adds value because of either our oversight or our public processes, or whatever.

And so it's absolutely clear that we understand what is the criticality, the risk-based assessment of it, and I think some of that -- further to Dr. Barnes, it's not clear when you look at what is planned during the time periods.

Because for the Commission to take what is quite an unusual move although we've done it quite lately, and it's a real indication to a licensee of a degree of discomfort for the Commission to be holding the reins so hard on a particular area that we require a great deal of work with CMDs and hearings and everything else, that we need to be ensured that there is a reason for that. And the processes -- they -- the timelines and processes and idea of what happens when and the outcomes, help us to understand if the staff recommendation is right or wrong.

And the Commission will make that judgement itself, but what Dr. Barnes was talking about was also fundamentally important for us to decide if that's necessary because that really is of -- a great signal that I don't think anybody really appreciates when the Commission has to do that, you know, is that necessary.

So we're going to switch subjects a little bit. I'll turn the floor over to Monsieur Harvey and then we'll start again with the rounds of questions on other subjects.

MEMBER HARVEY: My first point is subsequent to some comments by Dr. Graham -- Mr. Graham and Dr. Barnes.

I have difficulty to know exactly the status of the -- I should not even say the project but Phase I. I read all those documents and all we can see in the documents is "in progress" and wording like "in progress", "approaching completion", "near completion", "currently developing", and "uncertain" and I would add those unknowns underlined by Dr. Penna.

Do you have a certain idea of the -- my question will be very simple. What is the degree of completion of Phase I? Do you have an idea of where you are?

MR. STEANE: Bob Steane for the record.

I will get Mr. Forbes, our Mine Manager, to give you the information, to give you an update on the current status of Phase I.

MR. FORBES: For the record, my name is Rick Forbes, Mine Manager.

If you want a percentage complete, I would

put it in the range of 90 and 95 percent complete. For the drilling program with the grouting, that would probably be close to about 95-plus percent complete. We're within a few weeks of finishing that off.

As far as the dewatering wells and the pipelines and building to go with that, we will have that complete by the end of the November.

MEMBER HARVEY: Thank you. Does the staff concur with the -- that figure?

MR. LANGDON: Mark Langdon for the record.

It was hard for me to exactly say when they will be finished because it's more up to their schedule of how they're working, but I'd say most of their projects are coming along towards the end.

The water treatment plant will take a little longer I would say because they have a four-month period of operation, but they have to have enough effluent to run for four months to be able to put that last phase of commissioning in.

The other sort of, I guess, wild card in it is if you're going to include any of the Shaft 2 activities in there. We haven't really seen too much on that. They're sort of looking at that as a parallel project at the moment and they're still considering their options.

The other part, I guess, would be the geophysics and geotechnical studies. The biggest -- the closest numbers I've had, they're looking at possibly six-to-eight months before they get all the results and start compiling, but that's not necessarily an activity directly linked to Phase I. It could be into Phase 2 and 3 as well, but they would need those -- some of that information they may need before they go to Phase 2 and 3 though.

MEMBER HARVEY: Do you have any comment to add to what has been said by the staff?

MR. FORBES: For the record, Rick Forbes, Mine Manager.

Yes, about Shaft 2. Shaft 2 is running parallel to the Phase 1 remediation. My comments were directed at Phase I remediation.

The geotechnical work is being done independent of Phase 1 and parallel to Phase 1 and probably going into Phase 2.

The other issue to do with that though is as we commission the pumps and do the testing of the plug integrity, that will tell as they progress. If there's leakage in the plug that requires additional grouting, then we will do that. That will extend it, but I was referring the basic work that was within the scope of

Phase 1 for remediation.

MEMBER HARVEY: Okay. But it is linked to that certification at the end, that the pumps are working correctly. So Phase 1 will be completed at that -- when you will have -- will be certain that everything is okay.

Am I correct to say that the physical works will be completed by the end of the year -- of this year and then you will have to check if everything is okay before you say that Phase 1 is completely finished?

MR. FORBES: That would be reasonable, yes. Rick Forbes, excuse me.

MEMBER HARVEY: Okay, thank you.

THE CHAIRPERSON: The real strength of the second part of Monsieur Harvey's question is what kind of communication is going on between CAMECO and the staff and is this adequate, clear outcome-based, you know, communications.

I mean, we're going to talk to EQC about communications in a broader sense in a minute but what we -- what the Commission has to understand is if there is adequate, clear communications going on between the company and the CNSC staff, so I'd like to ask CNSC staff as to their view of this. Is it -- and then we'll go to CAMECO because this is one of the determinants of the quality of this application.

MR. HOWDEN: Barclay Howden speaking.

Before I pass it to my colleagues, I'd like to just give you a quick summary of the regulatory approach that we're taking because I think this might help understand the context of the comments we're going to be making.

Right now, our position is that CAMECO is in their Phase 1 operations right now and that in our opinion they're qualified and they put in adequate measures to protect health, safety, security and the environment for Phase 1.

Just because Phase 1 activities might come to an end, in our view that doesn't mean you automatically go to Phase 2 because there's a lot of preparatory work that's going into Phase 2, and this is where you start to get into a bit of the unknowns that people have talked about.

I'd just like to be clear, what is known is that Phase 1 as mapped out, we're satisfied that it can be done safely and we're going on site regularly to confirm that this is being done.

When we go on site, not only are we looking at regulatory compliance but we're looking for improvements, but we're also looking to make sure that the changes aren't detrimental.

As Madame Keene -- the number of contractors is significant and there's always been a contractor concern with not just this licensee but many licensees.

So our anticipated path forward is that the licensee would come back at some time during the term of licence, when they're ready, with an outline that their Phase 2 and 3 programs are revamped, are in place, verified or validated, and also have a detailed plan forward of all the activities that people want to see and showing how each hold-point criteria is or will be met.

From our view then the staff could make a recommendation to the Commission on the topic of qualifications and programs for continuing on to Phase 2 and 3.

We would do this, we're suggesting, in the guise of a commission hearing to the Commission. We are -- I just want to reiterate, we're satisfied with their qualifications and programs for Phase 1.

Phase 2 and 3, as you can see by the document table in 07-H21.1A, a lot of these things are works-in-progress and we're not in a position to give you an assessment. And we have to get to the end of that assessment before we can give you a recommendation on Phases 2 and 3.

I must apologize to Dr. Barnes. We have seen a lot of information and I acknowledge that we could have presented it better for you.

So in terms of going forward, one of the critical items is this communication -- is the discussions of plans. What are the timings going to be as they start to get traction and start to implement these plans?

I'd like to turn it over to Mr. Scissons who is the director responsible for this file.

MR. SCISSONS: Good morning. Kevin Scissons, Director of Uranium Mines and Mills Division.

In terms of communication as the key question here, CAMECO has continued to provide reasonably very good communication to the CNSC staff, to the joint regulatory group, on their current activities and approved activities that are ongoing under Phase 1.

The other issues where we continue to seek further information and updates are -- and improvements would be in communication on things like their safety culture, assessment reviews and improvements in some of these other technical areas.

But as this is all unfolding towards the Phase 3 and Phase 3 approval and assessment steps, that is still forthcoming and we are not in a position to recommend that these things have been finalized or we are

in a position to recommend to the Commission to go ahead with Phase 2 and 3.

So this information, this communication, this documentation, these assessments are still to follow and we are expecting continued improvements in communication and updates from the licensee and finalization of these key steps as they move forward in developing their specific requirements that they are proposing or specific activities proposing for Phase 2 and 3 and how the area -- the key areas on governance, quality and safety culture are all going to be addressed towards the Phase 2 and Phase 3 activities.

THE CHAIRPERSON: I would like to move -- we have colleagues from Saskatchewan Labour and the Saskatchewan Environment that I believe are with us in Saskatoon and I would like to ask them, at this time, if they have any comments to make about the matters that you have heard before us and on any aspect of this, but clearly with your views as to -- including the communications that you have with the company and with CNSC staff on the oversight of this licence -- licensee; and number two about the qualifications of the CNSC as far as your legislation -- not of the CNSC -- of Cameco as far as your legislative overview requires.

Could you put your microphone on, please?

It’s off. Thank you.

MR. MOULDING: Tim Moulding, Manager of the Industrial Uranium and Hard Rock Unit for Saskatchewan Environment.

Environmentally, Cameco has complied with their approval to operate pollutant control facilities to date because the mine has been flooded and the water treatment plant has been in a state of suspension.

There haven't been any releases of treated water to the environment for the period while they are undergoing their remedial actions to restore the mine works. Because of that and one of the things that -- the aspects of this whole process moving forward that we are focusing on as a key is the dewatering of the mine.

Again, Cameco has told us that the information on the dewatering will be provided in full as it becomes available. Those are the aspects that environmentally that we are focusing on right now.

Thank you.

THE CHAIRPERSON: And Saskatchewan Labour, are you there? Is there a representative from Saskatchewan Labour there?

MR. ALDERMAN: This is Geoff Alderman for the record, Mines Inspector for Saskatchewan Labour.

As regards our communications with Cameco,

Sask Labour we don’t really license. We're more reactionary. If we see a problem, we ask that it get fixed or order it get fixed and we have always found Cameco cooperative in that. We have never had any problems in that regard.

As regards to safety culture, this was mentioned before by my former boss, it's a nebulous term. My opinion, Cameco had a wonderful safety culture on paper before and now they will have an even better safety culture on paper.

The fact is the safety culture is a reflection of the management and with the changes in management of Cameco, we will have to see how Mr. Steane and his boys perform.

Thank you.

THE CHAIRPERSON: Thank you very much.

We will now then move to a second round of questions.

Doctor McDill, would you like to start again?

MEMBER McDILL: I had originally anticipated starting with one question and then sort of going to the other end of the sandwich, if you will, or the slice of bread. So perhaps you would want to reposition my question and go into the more technical

things which I also have questions about.

But my second question relates to Phase 5 which I realize is -- it is very difficult without timelines to sort of put this down, even vague timelines, but this is a question raised by one of the intervenors and also I am interested.

In section 5 of H21, it was stated that the original EA was sufficient to encompass basically everything that's happened and there is no need for an EA at sort of Phase 5.

I was hoping that staff could explain to the Commission what triggers, if any, there are that are relevant in this case.

THE CHAIRPERSON: I would just like to mention that Phase -- we know that Phase 5 is not in this licence but there is a statement that an EA is not required. So I think it is important for us to substantiate this because there was a note in one of the CMDs that asked for a new EA. So we wish to make sure that we understand this.

MR. SCISSONS: This is Kevin Scissons.

The construction and operation of the Cigar Lake Project is a subject of that environmental assessment under CEAA and that document is actually filed in January of 2004. There was a Reason for Decision issued by the

Commission in June of 2004 and that led into the construction licence for the Cigar Lake, the original construction licence for Cigar Lake of fall 2004.

In the assessment, -- the consideration of that was scenarios for accidents and malfunctions and that was included in that, including flooding events and resulting event of such an occurrence.

So the finding that additional environment assessment is not required is because it was already scoped in and has been provided to the Commission in both CMD 07-H21 and previously it was brought to the Commission's attention in CMD 06-M58, a significant development report.

But I did note now as we are reviewing that again that there was a 2006 date and it was actually 2004 was the environmental study report. So environmental study report including all occurrences for -- including construction and then development and then towards mining of the ore was all covered in the previous environmental assessments and those have been compiled, including the accidents and flooding scenarios.

However, of course, for this licensing period and for the requirements under the NSCA, we are clearly looking for more specific details for the Commission to have at hand when they approve these

remediation activities, even though the environmental assessments scoped and identified flooding incidents in construction right on through to operation.

We believe the Commission requires, as we do, the details of the remediation activities to address this flooding incident and that has all been covered under the scope of the environmental assessment that has been approved by the Commission.

MEMBER McDILL: So Mr. Penna's submission with respect to -- for example, his point six and seven, you believe that those are covered under the existing EA?

MR. SCISSONS: Kevin Scissons.

Yes, those elements are covered under the existing environmental assessment licensing.

MEMBER McDILL: Thank you.

My next question relates to pumping requirements. I believe your plans are to put down four submersible 250-cubic-metres per hour pumps. You can treat about 500 cubic metres per hour. What was the largest inflow that was experienced at Cigar Lake or McArthur?

MR. STEANE: Bob Steane for the record.

My understanding I think of the inflow at Cigar Lake I believe was 1,500 cubic metres an hour, just to confirm that with Mr. Forbes.

MR. FORBES: Yes, that is the approximate number we have from measuring the rate of climbing the shaft to the water.

MEMBER McDILL: So in the event that there is another water inflow event while you are trying to pump, you still won't have sufficient pumping capacity to pump the -- without letting it flood again. Is that correct? And maybe staff could comment.

MR. STEANE: Bob Steane for the record.

In the overall pumping strategy and plan, there are those four pumps from surface that have been installed which give the 1,000 and then as opportunities come that there would be additional pumping capacity added underground, then ultimately it will be 2,300 cubic metres an hour pumping capacity within the mine.

MEMBER McDILL: Would staff care to comment about them?

MR. SCISSONS: Kevin Scissons.

Prior to the flooding event, Cameco had in place in the sumps and dewatering pumps underground, capacity of around 500 cubic metres an hour.

So even if those were to be re-installed and coupled with the additional 1,000 cubic metres an hour from the four dewatering pumps from surface, that would begin to initiate that total number of 1,500 cubic metres

an hour.

On top of that, Cameco's intentions, as they have described, is to increase the pumping capacity underground further as well in upwards of 20 –- they say upwards of 2,300 cubic metres an hour.

Of key to this, though, these measures are not meant really for long-term pumping and treatment and discharge at those values. They have large surface ponds in place to –- for a temporary basis to handle large inflows of water from the mine, but they will only be required to release to the environment the quantity and quality of water that they are approved to release, i.e. that is currently 550 cubic metres an hour.

So until that changes, there's the discharge limits, but they have capacities to increase and handle large volumes of water from underground and temporary store them on the surface.

Key to all this, of course, is the safety of workers and ensuring that in the event there is another incident that people can be safely extracted from the mine without incidents of water, high inflows or high water conditions for that exit.

Thank you.

MEMBER McDILL: Thank you.

I think my concern is that if there is an

event while you're trying to dewater the mine, there is not sufficient pumping capacity and that was my question.

MR. STEANE: Bob Steane for the record.

The plans as they are is that as we are dewatering the mine, we will take it down in staged steps. We have a model and if the –- and we've already predetermined that if the inflow is greater than 440 cubic metres an hour, we will let the mine re-flood and we'll return to sealing because obviously the sealing has not been effective.

MEMBER McDILL: Thank you for round one.

THE CHAIRPERSON: Mr. Graham?

MEMBER GRAHAM: Just to follow up on that, and I hadn't seen anywhere before where you would only go to 400, 400 plus cubic metres an hour and then revert back to sealing.

Your large ponds, capacity of large ponds to hold untreated water until it can be treated, what's the capacity of those ponds in relationship to, say, a 1,500 cubic metre an hour pumping? How many days would that last you, those large ponds?

MR. STEANE: Bob Steane for the record.

I'll have Mr. Forbes, our mine manager who has those numbers.

MR. FORBES: For the Record, Rick Forbes.

Now, we have two large ponds there; PCP1, which is 15,000 cubic metres, and PCP2, which is 70,000 cubic metres. And I did some calculations on that and at 1,500 gallons –- or cubic metres per hour, we have about, let me see here, 70,000 –- 70 hours of storage on there with treating the -– and discharging that 550 cubic metres an hour to the environment.

MEMBER GRAHAM: (Off mic)

MR. FORBES: About 70 hours.

MEMBER GRAHAM: (Off mic) ...for both ponds.

MR. FORBES: No, the large contingency pond. So that ---

MEMBER GRAHAM: (Off mic)

MR. FORBES: It’d be another 10. It’d be about 80, 85 hours.

MEMBER GRAHAM: (Off mic) ...just if you did it quickly, I’m just doing it in my head, but regardless, Pond 1, Pond 2 could accommodate how many hours of pumping at 1,500 cubic metres?

MR. FORBES: Approximately 80 hours.

MEMBER GRAHAM: For the two ponds?

MR. FORBES: Because you're treating and discharging at approximately 550 cubic metres an hour during that time.

MEMBER GRAHAM: So really, if you got into a situation where you had flooding and you have the capacity because you're putting down pumps that would pump 2,300 cubic metres an hour, so if you were pumping at that capacity, you only have 80 hours of holding and then a decision has to be made to cease pumping and let the mine flood. Is that what you're saying?

MR. STEANE: Bob Steane for the record.

That's if the pumping capacity in ponds, first as Mr. Scissons outlined, the envelope with which -- within which the operation is working is the licensed discharged rate which is 550 cubic metres an hour.

So then it is that differential between the treatment and discharge and the inflow that provides us three or more days, but three days to have an orderly evacuation of the mines.

So the contingency ponds are really there for safety and ensuring that there is time.

The decision on the evacuation and re-flooding the mine would be made and the decision points are incorporated there long before the three days are up. It gives us three days for an orderly evacuation.

MEMBER GRAHAM: That's what I was going to be coming to was going to be the evacuation of the mine. What timeframe have you got for total evacuation of the

mine if a flooding event occurred similar to what was experienced the last time?

MR. FORBES: Rick Forbes for the record.

If we use the cage elevator, if you will, to go to surface, we would be able to vacate the mine in less than two hours quite easily.

Now, as a fall-back, we are putting in a ladder way to surface that if for everything else fails, the men can still climb to surface. We estimate that between six to eight hours to have the full crew out there.

We also have another device called the Timberland that we can move into place. It's a small caged portable hoist system that can lift four men out of the mine at a time to –- if there was people that could not climb the ladder way.

MEMBER GRAHAM: What is the maximum time of evacuating the mine with all aspects of using the ladder and using –- or failure of using the hoist and using the third alternate you have, what is the maximum time to evacuate the mine?

MR. FORBES: Rick Forbes for the record.

The maximum time would be eight hours if everything else failed.

MEMBER GRAHAM: And auxiliary power to –-

you have auxiliary power to run the lifts and so on if there was a power failure or anything else. I presume the motors are all on top of the ground, not underground where electrical could be shorted and so on. So you have auxiliary power, you have all the back-ups scenarios. That eight hours is the maximum time to be required?

MR. FORBES: We have full power back-up to run our hoists underground and the hoists -– the hoisting devices are all on the surface.

MEMBER GRAHAM: And access to the hoists and access to the various ladders and other devices, they’re in locations sufficient for all people to be able to get there because I recall back at one of the hearings we had there was pretty significant -– water was coming in very fast and people were very close to the depth of water that was reaching quite high on their bodies and so on, if I remember correctly.

Has that -- all those accesses are -- have been tested that they will be able to reach the various shafts that they need to evacuate?

MR. FORBES: Rick Forbes for the record.

We have two means - well, the main level, the main working levels are for 80-level where almost everybody will be on. There are man way from surface down to the 420-level within the shaft. There’s also another

ladder way from the 420-level down to the 480-level in the shaft, as well as in another raise. So there's two means of getting up to the 420-level.

There should be no problem with getting people up to that level and then we would stage them to surface from there.

MR. STEANE: Bob Steane for the record.

I think this discussion speaks to actually taking it back a step. What we are putting into our procedures and our plans are predetermined; if the flow reaches this level, then these people leave. If the flow reaches this level, then these people leave.

And so it is not getting down to the eleventh hour of evacuation of the mine, but if a flow reaches a certain level long before we have filled up underground openings and storage, we would have predetermined evacuation points that allow us for safe, orderly evacuation of the mine.

MEMBER GRAHAM: Yes, but I don't think we have access to that knowledge of what level, at what flow you start evacuating, what flow you do that. We have not, I don't think – I didn't see that in the documentation.

MR. STEANE: Bob Steane, for the record.

That's correct, and that is -- we would have to supply that to you.

MEMBER GRAHAM: Another question I have, Madam Chair, and I won't get into detail but, in your overheads on the hydrology of that slide, even with it on the screen, you can't read the print. You can't understand it well enough and I think it's very important to understand the physical conditions that were simulated and so on, that cause that and so on, and what you're doing, and how much concrete you poured.

The concrete plug, was it poured in relation to the inflow that's on that slide with regards to those overheads that you had this morning with regard to the hydrology? Is that where you put the plug?

MR. STEANE: Bob Steane, for the record.

The concrete that's being placed underground there's been two locations.

One was into an access decline, to provide stability that was below the in-flow area. Then the plug that we're talking about is immediately downstream of the rock fall and it's immediately adjacent to that where the rock fall took place. That plug has now completely filled that drift, and we know that from where we put ultrasonic sensors, like a radar screen. We can see the profile of the plug as being formed and also from pressure testing.

And then the last phase that's to be done is the rock fall itself and up into the area where the

rock came out of the back of the -- the top of the -- the roof of the drift is the area that remains to be cemented. So the cement and growth are going right into the place where the rock fall took place and then the water inflow.

MEMBER GRAHAM: Are there any other faults that could -- that have been identified similar to the one that initiated the first flooding?

MR. STEANE: Bob Steane, for the record.

I think I'll get Mr. Hatley, who is our mining specialist, to talk about the hydro structure.

MR. HATLEY: For the record, my name is James Hatley. I'm the Senior Geotechnical Engineer for Cameco Corporation.

Speaking to the identification of faults, there has been a re-look at the structural geologies through the area.

There's a particular fault or set of faults that made the conditions in the in-flow -- in the particular in-flow area more adverse. There are similar types of faults and I'm meaning the orientation of those faults; so those have been identified through this structural geology process.

And so the particular areas within the mine -- and I'm speaking now to the presentation that you saw -- there is one particular slide. Some certain areas are

identified as having a higher risk and that speaks to particular faults, particular orientations, particular infillings.

They don’t exist in all of them, but they do and can exist in some of them. So we’ve gone through a process of identification.

Thank you.

THE CHAIRPERSON: Dr. Barnes.

MEMBER BARNES: If I could pick up on that last point and since it’s fresh in people’s minds, I think what I understood from the previous discussions we’ve had with the company is that, in many cases, there was not clear observation of these faults when the drift were being in place. That was clear. There were no geologists down there to recognize that you actually had a fault and it was in an area where the drift was actually greater than had been designed and presumably, that created the weakness that allowed the rock fall to occur.

Also, you are not doing enough forward drilling to understand the occurrence of faults ahead of where the drilling was taking place, and thirdly, the real problem was that you were not fully understanding the topography on the unconformity.

So the mine was designed to have about 10 metres’ gap between the top of the drift and the

unconformity, but the unconformity had a relief of about 30 metres and, if you didn't know that, then there was a danger of the unconformity which had the high water hydrogeology issue with it being intersected by the drift. And that combination of things was the reason, really, why the flooding took place.

So if I could just pursue it further, I think the real problem is a lack of understanding of the stratigraphy, particularly the unconformity, and despite adding a number of geoscientists, the word stratigraphy or stratigraphers is not mentioned in this document. It's adding more structural geologists but I don't think that's good.

Geophysical surveys; that's good but I'm not sure that the company has necessarily got the information at hand to understand enough the topography on that unconformity.

We're not told -- for example, in here, we're plugging the drift but we're not told what is going to happen and let's say, in Phase 4, Phase 5 whether you plan to continue the drift past the plug, in other words moving ahead, which is you're aiming to get to the ore body. Again, what is the relationship of that unconformity to the ongoing root of that drift?

We're told that there's a good deal of new

modelling, hydrogeological modelling. That's good but the issue here is that the failure took place in very site-specific conditions, which are not easily captured by a broader modelling analysis.

The modelling is only as good as the information that you put into it and if you don't have very specific information on the location of the faults, on the location of the unconformity, et cetera, et cetera, then the modelling will not give you what is -- what is stated in here is that you're using it in order to lower the risk that there will be such flooding events in the future.

The ore body itself is typically developed because there are faults, right, associated with the unconformity and therefore, you're heading into a zone in which you might expect greater ground weakness or faults and so on.

And from what I could see before, you did not have enough forward information to know that. And so all the information we're hearing about now, which is sort of repairing the situation, is not giving me any particular comfort that that -- how you lead into the next phase or in the next licensing phase.

I'm just saying now that we're addressing things very specific to this initial construction, repair

of the mine but I don’t have a full comfort that all the things being put forward are going to allow the company to safely mine further along the plan that you had without lowering the risk of further failures and further flooding events like that.

So that’s my somewhat rambling comments, but perhaps I can have a geotechnical specialist in Cameco provide some comments to those.

MR. STEANE: Bob Steane for the record, and prior to having Mr. Hatley deal with the more direct specifics, the one item you raised there was the -- are we planning on mining through the plug and that question, that is very much a question within Cameco.

We are re-evaluating the mine plan and whether we do any further development on that 465-level or not, we have not determined through this geotechnical evaluation. That is one of the big questions within Cameco, is do we carry on that level or do we have an alternate mine plan.

I’ll get Mr. Hatley to deal with some of the more specific aspects of your question.

MR. HATLEY: For the record, James Hatley.

I’m just reviewing a few of the notes provided by Commissioner Barnes.

There’s a number of statements that were

made. One of the things was, there was -- we're speaking to mapping. There wasn't timely mapping in the particular case of the inflow. There were geologists, of course, going underground. They were doing mapping at the time but it's certainly not particularly -- it was not done on a timely basis.

The unconformity does vary in that and we are studying that, both through structural geology and through geophysics and we're getting a much better idea.

In the particularly of the inflow, it would vary a few metres. I thought I heard the word 30 metres that might apply on a very, very large regional basis, but site-specific, we would be talking about a few metres.

Moving ahead, in asking about how the mining -- potential mining at 465 meter level, we are studying -- we are gathering this information, this, again, structural geology; hydrogeology; rock mechanics. And we're looking at that and that's going to feed into the mine design. And so, all options are open on the mine design and we'll take the necessary measures to ensure a safe mine design. And that goes back, again, to looking at fundamentals, which include geology.

Certainly, one of the things that we've done is, we've gone back and looked into geophysics. We're applying current techniques; three techniques have

been applied. We're also applying a fourth technique to, again, understand the unconformity -- understand major structures. And geophysics allows us to take, certainly, the structural geological information gathered from core data and to broaden it out over a regional sense, so that applies -- that helps with mine planning, rock mechanics and hydrogeology. That's where the information comes from.

And often, when we do modeling -- I'll actually let Dr. Richard Brummer speak a little bit about rock mechanics modeling but, in general, when we do modeling, the parameters are varied.

We have parameters and we have data to put into these models, but we also vary the parameters in extreme conditions, to see the variance and the effect of those parameters. So that would be an example of something that's done in rock mechanics and stress fields -- would be a good example for that. So we vary the parameters to see their effects, as well as take specific data into account.

The other thing that we're doing on a corporate basis is looking at standards across the organization. So we're looking at minimum criteria in a number of disciplines. And so those are being set, and that's part of the CAPIP program.

So we've looked into that; we've self-identified that and also, third party consultants have helped us identify that and so those are specific to this -- to that program.

One of the things that we've done and we haven't spoke of yet, as well, is also -- you're speaking about confidence within mining -- for the mining. The lessons learned about Cigar Lake and some of the past inflows have been shared with the other mine sites. So as we look at it, as an organization -- I guess I am deviating a bit from the technical side but we've gone ahead and talked to the chief engineers, the chief geologists, the staffs at the different locations and communicated what we know, that happened.

So again, that's our internal knowledge -- as well as consulted knowledge, has been shared. And so other sites are much more aware than, let's say, after the McArthur River 2003 inflow.

I've personally given some of those presentations and so this information is being shared on an organizational basis, to these different sites. Some of it has direct application; some of it doesn't. But either way, it is all shared and so it's common knowledge.

I think I will ask Dr. Brummer to talk a little bit about modeling and the variability of that.

DR. BRUMMER: Thank you, Madam President.

My name is Richard Brummer from Itasca Consulting Canada. Our company specializes in helping mines with particular types of geomechanics problems to work out solutions to them and we work with companies all around the world in doing that.

Dr. Barnes is quite correct. All of these properties are very variable; the locations of faults are very variable and are not well known and understood. The location of the unconformity is not completely known. One cannot know these things until you've finished mining an ore body.

In the nature of the work we do, we try as far as possible to account for all this variability. We use a large range in material properties; we use ranges in locations and orientations of faults and joints. There is also a number of different rock types on this property that we also include and look at, in all of the work that we are doing.

That, in fact, is perhaps a change in what has taken place over the last year, since we've been involved here, in that all the work we're doing and the advice we are providing to Cameco is done in risk terms. So we're not giving a hard answer in terms of excavation location.

If this was a mechanical engineering problem where you were designing something with steel, you would know very clearly the strength of steel and you could provide a very clear answer.

The nature of the problem in this type of mining is that all of the variables and all the inputs vary very widely and have a large range in properties and we are doing our best to identify what combinations of these things will result in the greatest risk and what decisions can be taken to reduce this risk down to manageable levels.

Thanks. That's it.

MEMBER BARNES: I kind of like the feel of the questions.

In -- on the staff CMD H21A at page 3 -- this is at 2.4, the regulatory hold points, it says:

> "The criteria commitments and requirements contained within a single hold point originate from four sources."

And the fourth of those, which I'll read:

> "…applicable technical hold points created through requirements, limitations of a technical nature. An example would be the commitment by

Cameco to grout, cement or freeze ground to limit the groundwater inflow rate to less than 440 cubic meters an hour before mine dewatering can be initiated (440 cubic meters an hour is 80 percent of the water treatment plant capacity of 550 cubic meters an hour).”

So could I ask Cameco to tell me how you would measure, accurately, the groundwater inflow rate, to know that it’s less than 440 cubic meters an hour before mine dewatering can be initiated?

MR. STEANE: Bob Steane, for the record.

I think that the -- we envisage -- there is, as we lower the water level in the shaft, we have and are developing a model of the water inflow so we’ll be able to predict at different hydrostatic heads, as we lower the level in the shaft, what the inflow would be when the mine was dewatered.

So I think that what we see there is, we see the water dewatering being when the shaft is emptying -- you’re emptying the mine workings. We would have already pre-assessed the flow through the plug by comparing the inflow in the shaft -- that’s when we take the level down in the shaft in stages. We’ll take it down

a certain level, hold it there for a number of days, get a measure of the water flow, compare that to what the model would say you should get at that stage and if that's predicted within 440, then we would allow the shaft to re-flood. If it was less than the 440, then we'd take the shaft to the next level.

So in that manner, that's how we would assess the inflow through the plug prior to getting to the dewatering of the mine -- the mine workings.

MEMBER BARNES: I assume you had to do something like that and I would take the lowering of the water in the shaft as part of the mine dewatering. I mean, presumably it's in hydrologic communication, so it's the same sort of thing.

So -- all right; if it was just a technical point, it left the assumption that you could actually measure it without any lowering of the water table, basically.

So -- but in truth, you're not -- were there any other inputs of groundwater into the mine, apart from the plug system, overall? In the shaft? I mean, you had leakage into the shaft at one stage, right?

MR. STEANE: For the record, Bob Steane.

Although I wasn't there, I'm told that prior to the inflow event, the water in the mine was

approximately 60 cubic meters per hour.

MEMBER BARNES: And in Phase 4, I saw no mention -- I assume it would come in Phase 4 before you went to Phase 5 of the repair or replacement of the heavy bulkhead doors that you remember couldn't close. Am I right in thinking it wasn't mentioned? Or -- should it be mentioned?

MR. STEANE: Bob Steane, for the record.

We are and will be doing and are doing an assessment of bulkhead doors, whether they are the suitable method to be used or not. We've also, in our presentation today, said that when we've already made a determination -- that when we do dewater the mine, we will not use those bulkhead doors until we have assessed them -- done a physical examination of them.

We are also in the process of looking at the engineering design of those and the applicability of those doors into the mine; is that the right thing to do or not?

So we haven't reached that decision.

MEMBER BARNES: I would like to come onto the point that was raised by Mr. Graham and Dr. McDill which also raised some concern to me about the overall design of a mine that was perhaps with the richest ore body in the world for uranium, which is a huge investment,

and it’s clearly a significant investment going into repair the mine at this stage.

And with now a known conditions of a failure that introduced a large amount of volume of water into the mine, and conditions in the area which certainly imposed some risk of similar events in the future.

I mean you’re going to have to lower the risk and engineer around that but, nevertheless, one has to admit that there is a potential for that and that’s why you’re putting the extra pumps down there, et cetera.

I’m still curious about the kind of math that you’re employing here. Where you have a treatment plant at 550, which is your hold point basically, and another hold point you’re referring here, but that’s a processing limitation and then at other times when one might need to put out 2300 cubic meters an hour at maximum. That’s a pumping capacity for short periods and yet a holding capacity in the reservoirs are only set at 80 hours. Eighty (80) hours. So if you had one major flood like this again and, you know, it could be larger than this particular event, then you’re constructing a mine at considerable -- I know we’re not talking about the investment, but the safety here of the workers to get them out and the safety of the environment of having potentially -- some low level contamination of water that

you’re having to pump out of the mine with a very limited capacity to treat the water in such a way that the effluent -- the treated water, which is not imposing anything on the environment -- that’s a strange equation to me.

You either would have to increase the capacity of the water treatment plant or increase the reservoir capacity. And yet, I don’t see any of those being discussed in this process.

In other words, you’re going to fix the mine, but if there’s another problem, then you have the same problem again. And surely the solution cannot be let’s get the workers out of there, let the mine flood again and we start all this process again.

So what plans do you have either to increase the plant -- the water treatment plant capacity or to increase the reservoir for water if it had to get pumped out.

MR. STEANE: Bob Steane, for the record.

The longer term plans are, and we have initiated studies to look at the increasing -- what the impacts on the environment and increasing the capacity of release and, if that is then appropriate, then we would look at the water treatment plant and then storing at capacity.

Adding reservoirs on surface will only be a -- no matter how big you make them, would be a short-term solution, but we do see that as -- and fundamental to the philosophy we have is to ensure that the environment and the workers are protected. And so that the filling the reservoir and then treating the water at the current rate can be done without impact on the environment and can provide and does provide safe time for evacuation.

The longer term work to this has been initiated and undergoing is what can we do in terms of the overall release volumes and how does that fit with the project.

MEMBER BARNES: But it's more than a philosophy. It's a regulatory requirement. Right? Not to threaten the environment by releases of untreated water. So the question is, I think, at the end of this -- and it cannot be left to the end -- is that you have to be thinking now of this sort of equation that we're talking about; if there's a flood, how you can accommodate that so there isn't contamination of the environment by untreated water.

So the question will be at some point, and it should be, I think, in your mind now, is a treatment plant of 550 cubic meters an hour satisfactory for what you're proposing to do in this mine site.

MR. STEANE: Bob Steane, for the record.

You're absolutely right. That is the question. I was not implying we would release untreated water to the environment. We would not release untreated water to the environment. And we are embarking upon and assessing the impact of larger volumes into the receiving environment.

MEMBER BARNES: But if there was a flood into the mine and you can't -- you don't have a holding capacity for more than 70 days, and you're not releasing contaminated water into the environment, then where are you going to put the water? It has to fill the mine up again. It has to flood the mine. And is that really what you're proposing to do as the world's leading uranium mining company with the richest uranium mine?

MR. STEANE: Bob Steane, for the record.

The constraints on the project and that is today's plan. That's the plan.

MEMBER BARNES: I think at a future meeting it would be helpful to hear from the unions whether they think this is an appropriate way of safety for the workers that the solution for such an event is evacuation because you're flooding the mine, knowing what some of the workers went through in the last situation. So -- but staff, would you like to comment?

MR. SCISSONS: Kevin Scissons.

The 550 cubic meters an hour is the approved release regulatory limit right now. The capacities of treating and discharging waters -- the revamped commissioning of the water treatment plant plus the large PCP pond number two -- there are systems designed into it that they could actually begin to treat waters from that system.

In other words, you could have two separate discharges from the PCP pond two system as well as the main water treatment plant. That was a design consideration put forward. Right now, of course, it is not approved to do that. So they have capabilities to treat waters approaching probably 1500 maybe 2000 cubic meters a hour -- numbers in general there.

What they don’t have is approval to discharge at those rates. So that, again, we have to revisit the 2004 Environmental Assessment because now we’re talking loadings and discharge quantities and potential impacts to the receiving environment.

Even though it -- in both cases, we would be -- they would only be allowed to discharge treated water or water meeting effluent limits. The total quantities and loadings is still another assessment determination that would have to be made and if another

environmental assessment for larger volumes of releases is required, then that would have to be undertaken.

So those steps are still to unfold and clearly that contingency for going back into the mine and handling large volumes of water not only up to surface but from the facility to be released in the environment are other steps underway and still to be initiated by CAMECO for us then to review if, indeed, they want to propose those measures.

In the interim, we remain satisfied that if they have measures to get workers out of the mine and they have capacity on surface to handle that waters, and workers can be removed from the mine and, indeed, if that fallback is once again to flood the mine, unfortunate as it is, it is under our mandate of health and safety that that would still be acceptable though I know, I'm sure, at CAMECO it's not something they would want to envision.

So the quantity -- the question of quantity of discharge is still -- potentially, it has to be addressed, and it is available to be addressed but may require another environmental assessment or environmental determination.

THE CHAIRPERSON: I think this raises this whole issue of the accident scenarios for CAMECO and the -- as the question from Dr. McDill talked about, the

validity of the EA that we have. And I think this was a very appropriate question, because I think there has to be a look at the accident scenarios and the -- in light of your risk assessment of this facility based on what has happened and what you can look at in terms of scenarios.

The Commission should be notified if there is a requirement to revisit the EA immediately by either -- by notify by CAMECO or the staff, because this is a serious requirement for us.

I'd like to move on to Monsieur Harvey.

MEMBER HARVEY: Merci, Madame la présidente.

For my question, I'm referring to Dr. Penna's submission in point five when he expresses concerns about the water contamination in the mine.

My question would be have you recently collected data on water contamination in the mine? My second point would be are you expecting highly contaminated water? And should that be the case, could that interfere with the timing of dewatering the mine causing some problem because the ability of the water treatment plant to accept that highly contaminated water.

MR. STEANE: Bob Steane for the record.

The water contamination would be so that all the water that would be brought to the surface would

go through the water treatment plant and would meet all the requirements.

The question specific to the water quality and I'll have Jean Alonso, our environmental specialist, give you the more specific answers on that.

MR. ALONSO: Jean Alonso for the record, Director of Compliance and Licensing for the Mining Division.

Yes, to your question on whether or not we've collected water samples, we have. The water quality is in fact quite good.

One point in fact is that the source of the water didn't come from the ore body itself. It was from around the ore body. So the contamination level is not as great as it would have been had it come from directly from the ore body.

THE CHAIRPERSON: Sorry, could you be specific about "quite good"? You know, what does "quite good" mean?

MR. ALONSO: The water quality is below the prescribed limits in the licence.

Just another point to clarify some remarks with respect to water treatment made previously, the plant is in the Phase 3 of commissioning, which means that it is up, it is operable, and it has treated water successfully

and released water to the environment.

And I just wanted to emphasise the fact that it's operable also means that the training and the programs necessary to operate the plant have been implemented as well.

MEMBER HARVEY: Have those data been sent to Saskatchewan Environment? Maybe you could have the comment from Saskatchewan?

THE CHAIRPERSON: First of all, could Cameco verify that this information has been supplied to CNSC staff and to Saskatchewan Environment?

MR. ALONSO: For the record, Jean Alonso.

Yes, it has. It's part of our regular monthly reporting information.

THE CHAIRPERSON: So Saskatchewan Environment, would you like to comment?

MR. MOULDING: Tim Moulding with Saskatchewan Environment.

Yes, to date the water quality has been within the regulatory limits of any waters released to the environment. Cameco does have the ability to operate the water treatment plant to our knowledge but if there is water that is pumped to surface that is required for release, it can be treated and meets the regulatory requirements for release.

Just to speak to the point of assessment as well, as we understand it right now, Cameco's plan is to operate and dewater the mine within the conditions of their current operating approval.

If that were to change and they were to look at releases in excess of what the conditions in the operating approval allowed, that would trigger –- that would be assessment triggers for the province under the provincial *Environmental Assessment Act* and we would have to re-examine those conditions in light of the *Environmental Assessment Act* and make a determination as to whether or not release is above what is presently approved, whether or not that would be allowed or not.

Thank you.

THE CHAIRPERSON: My question is with regards to licensing. I believe we have four suggestions that have been put on the table. We have an indefinite licence. We have no licence from Dr. Penna. We have two years and EQC has suggested three years.

I think that the Commission is interested in –- has read the documents in terms of the rationale between the various possibilities.

So I'd like to return to the proponent, to Cameco and then to staff and then to the EQC in terms of what we've heard today because the Commission would like

to have that evidence before it to make what is a decision that is a rational, effective and efficient decision and I'm not sure we have exactly a sense at this moment of the day as to what would really be the best way to proceed at this point.

Mr. Gitzel, do you have a point of view?

MR. GITZEL: Tim Gitzel, for the record.

Initially, Madam Chair, we certainly weren't looking for an unlimited licence or it was more -- the point is activity-based licence, that as we moved along, we knew we would have to come back to the Commission for each stage, Phase 2 and 3 together, Phase 4.

So it was more in that regard, saying we would be back in any event in front of the Commission having to justify carrying on, having to prove that we had done what we said we would do. So that was our thinking. It certainly wasn't an open-ended licence.

That said, the staff has put forward a two-year term. In any event, we'll be back before that at least once, several times, and so we would be prepared to support that position as well.

THE CHAIRPERSON: In your mind, further to the discussion today as well as what is the discussion within Cameco, that activity based would then be at the

end of Phase 1 and when you had all -- if I understand correctly, and all the plans and all the information was available to start Phase 2 and 3, if I understand that, do you feel -- do you consider that you have a clear idea of exactly what that point is?

MR. GITZEL: Tim Gitzel for the Record. We have, as I said, our ideas as to when we will be finished Phase 1, when we will have the different systems in place, the governance piece, the quality piece leading to the safety culture, when we will be far enough advanced. In fact, we track it by what we call our CAPIP, corrective action program. So we have ideas of when that would be.

We think some time next year we would be back again looking to move to the Phase 2/3 and then that would take us some period of time and then come back for Phase 4. And we've never said anything past Phase 4 would be within the licence period. So that's why we're thinking that the two-year licence would fit the schedule.

THE CHAIRPERSON: The reason I say this is one of the things that I learned when I came here, that a two-year licence means that everyone starts gearing up about a little after a year. So I think we have to be very realistic upon, you know, where people are and I must say writing CMDs is not what we consider a health and safety benefit. So we just want to make sure that

everyone understands what they're talking about here.

I can move to staff now in terms of your view towards, after you've heard today, what would be reasonable.

MR. HOWDEN: Thank you. Barclay Howden speaking.

Originally, we had proposed the indefinite termed activity-based and I think as you're aware, this is based on the optimistic assumption that all programs to support mine dewatering and mine re-entry would be completed, audited by Cameco and verified by CNSC staff or that this process would be well along the way.

With our supplementary, we revised that to two years, still activity-based. However, at this point in our view there's still quite a bit of uncertainty as program documentation remains under review or revision and I've cited several times Table 1 on page 5 of our supplemental CMD shows that there's still a lot of work in progress.

And this combined with the technical challenges posed by the planned remediation phases has led us to recommend basically a complete review by the Commission in two years time to take stock of where things are.

Now, from our perspective, we're not trying

to create more work for ourselves, but we felt that given the uncertainty at this moment in time, we wanted to put a marker down and knowing that we would be comfortable with two years and even if Phase 2 and 3 didn't come along, Phase 1 would continue. Our expectation is that Phase 2 and 3 would come during that period of time.

However, in choosing the actual length of licence, as you're aware, we have been moving to longer licence periods, but in this case because of the uncertainty, staff returned to a traditional two-year licence time and we felt that that would be appropriate with a report at the one-year time.

When we heard what the EQC said today, three years terms, I think we could support that again, but we would propose that we come back or Cameco come back on at least a yearly basis to report to you on progress. Now, that might occur if they come back actually seeking approvals under the licence, but if for some reason they weren't able to get to Phase 2 and 3 as fast as they thought, it would at least bring the Commission up to date at least on a yearly basis of where things stand in terms of performance under Phase 1 and where they were with regards to going to Phase 2 and 3.

And as you know, a lot of the questions being discussed today talks about uncertainties and

certain things will only be known after certain activities have occurred. But at this point, we were proposing to, but we would certainly be open to three years but with the requirement for the licensee to come back on a regular basis to update the Commission.

Thank you.

THE CHAIRPERSON: I think one of the issues that the Commission has talked about though, today, is that although we don't want to micro-manage and know every document and see every document, we're assuming that you see every document.

And what I'd like to hear from you, Mr. Howden, is that you -- that the staff at the CNSC understand clearly what is Phase 1, what would be the outcome based to click from Phase 1 and exactly what would have to be done from your point of view before you came before the Commission on the Phase 2 and 3 approvals?

MR. HOWDEN: Barclay Howden speaking.

From our perspective, the process to get there is very clear in our minds and what we are still working on is the regulatory criteria that we would use to trigger when the next step could be gotten to, and we're still working on that at the moment and we wouldn't come back to you until we had that clear.

One of the things we also wanted to do is

offer the Commission the opportunity to examine Cameco's qualifications and programs before they dewater the mine and re-enter the mine, because there has been a lot of discussion today on what's being done, what could be done.

But in our view, that's a significant step and we want to make it very clear that the Commission has that opportunity and we also want to make it very clear that you understand, clearly, what criteria we have used to make our recommendations to you.

So certainly, the process is very clear; we still need a bit more work on the hold points because we're just actually looking at the information at this point.

But when we come back, we would be able to say, we recommend going to Phase 2 and 3 because this hold point has been satisfied and here's the 20 criteria that we assessed and we felt was appropriate. And we can say not only were they assessed by us, but they were assessed previously by Cameco and we are doing it from a verification standpoint.

I think this is the really important thing; is it's their project. They have to do the right thing. It's our job to verify that they've done the right thing and we want to come back and do our job and not be in a position where we're doing their job.

Thank you.

THE CHAIRPERSON: But Mr. Howden, the staff hasn't suggested that the Commission delegate any of this, that it comes back to the Commission. I'd just like to understand your reasoning in terms of not going for the delegation to you rather than coming back to the Commission.

MR. HOWDEN: Barclay Howden speaking.

At this point, we feel that this is a significant issue. The confidence of staff and the Commission in the licensee has been reduced significantly as a result of this event and we felt that it would be best to come back to the Commission so that they could satisfy themselves.

When we came back, we would probably be proposing a delegation at that point to some of the smaller hold points to be able to -- we'd be in a position to effectively mange those hold points.

But I think there are some fundamental questions that are being -- that we anticipated would be raised by the Commission and were raised by the Commission today that the examination of the qualifications of the licensee should be redone before Phase 2 and 3 which is -- we've basically said, "Phase 1 is surface; Phase 2 and 3 is actually going underground and the risk increases

significantly at that point and I think it's appropriate that the Commission re-evaluate the qualifications at that time.

That is our rationale for the recommendation.

THE CHAIRPERSON: Mr. Howden, the EQC has commented in a way that I don't think they have before in terms of the communication that staff and Saskatchewan has or has not done with them.

Do you have any comments about this, because I think this is not just this project but I think it's a fairly significant issue for us in Saskatchewan, as well, from the Commission's point of view?

MR. HOWDEN: Yes, thank you. Barclay Howden speaking.

I'm going to ask Mr. Scissons to comment on our ability to keep the EQCs up to date on our regulatory activities.

Before I do, one of the comments that was made by the EQCs was on Licence condition 7.3 and 7.4. Now, those are conditions that apply to the licensee but we would make a commitment right now to make sure that when we received those reports, they'll be immediately forwarded on.

In terms of the overall communication

between us and the EQCs, I am going to ask Mr. Scissons to comment.

MR. SCISSONS: Kevin Scissons.

Yes, the last update provided to the EQC members was in early October at a meeting actually held at Cameco's Rabbit Lake site.

Mark Langdon, the project officer there, attended to give them specifically an update on the Cigar Lake project. That was actually part of that agenda. So we do integrate that into the communication process of the EQCs.

If we're seeking for increased communications, we can do that. We have utilized Betty Hutchinson from the Northern Mines Monitoring Secretariat as a liaison and continue to provide our documents through that.

We will continue the liaison with her on improving that as need be, utilising EQC meetings that are available in Northern Saskatchewan at opportunities and to provide updates not only on this project but other projects when the EQC members are there.

So I guess I'd put this in our continuous improvement messages delivered today and we've heard that and we will put that further into our regulatory plans and our communications abilities on these projects and I'll

deal with the EQCs and along the Northern Mines Monitoring Secretariat for that improvement.

THE CHAIRPERSON: My question -- you've been very patient, Mr. McDonald on this.

My specific question is about whether anything you've heard today has changed your view about the three-year licence or what you're looking for in terms of comments or from EQC on this.

There's been a lot of information given, but have you got any comments about licence length or anything else you'd like to comment about right now?

MR. McDONALD: Yeah, Merv McDonald.

The reason why we recommended three years is that there is enough time to accommodate activity and to ensure that the focus remains on the quality of work rather than process and it provides opportunity to review properly.

And that's about it.

THE CHAIRPERSON: Thank you very much and I appreciate that. I can say it's quite a different process than we usually have in terms of licensing.

Dr. Penna, do you have a comment on this? You had recommended no licence at all. Has anything you've heard today changed, or you wished to comment on that?

DR. PENNA: Thank you. Dr. Penna for the record here.

I do have a few thoughts. I'm not quite clear as to the meaning of accountability, and maybe that might be a larger discussion here, because in my -- as I suggested, accountability does mean some form of -- well, strong term, punitive action for failures that we have witnessed here.

And in the discussion that was engaged in with respect to the amount of water that is being discharged may very well reach what might constitute the need for environmental assessment, I'm still very concerned about that because that's become one of the unknowns at this particular point in time.

I am concerned about the levels of contamination. They say that within the prescribed limits, but for me the minimum is no contamination. Obviously there is some level of contamination. I don't know what that level is offhand. I don't know that.

And there was no discussion here about, you know, the fact that, in my mind, what I see is a hole is punched in the bottom of the lake and you have slime and sand flowing in. So the basic ecology of the base of the lake has been significantly changed, number one.

And number two, they're talking about the

treatment of water, et cetera, et cetera, but how are they going to handle all the slime and the sand that is down there right now? You know, there are so many factors here.

I'm a layman person in this situation here but I can just -- I can visualize and I don't think I'm far off the mark. You know, there would be a serious damage to the base -- to the ecology of that lake and as I say the slime in the sand, it was there.

Thank you.

THE CHAIRPERSON: But, Dr. Penna, you haven't -- have you changed your recommendation as to the fact of no licence?

DR. PENNA: Not at all.

THE CHAIRPERSON: Thank you.

I do want to address your comments about accountability and certainly the Commission, under the *Nuclear Safety and Control Act*, does hold licensees accountable and we certainly do use that to exercise our regulatory oversight.

Clearly, licensing is just one part of this and having a licence on a facility with restrictions or however we term that licence, however we form that licence, is, frankly, how -- one of the methods that we use to control the facility.

Having an unlicensed facility is not absolutely the best control you can have. I mean, what you permit underneath that is -- and the Commission has clearly shown a great deal of constraints that we put on licenses and on licensees as to what they can do within that licence.

But having them licensed is, in our experience, is absolutely essential because this facility would exist whether or not -- even if wasn't operating. So just to point out to you, and clearly the staff at the CNSC in Saskatoon could discuss this with you more fully if you wish.

The general regulations of the Act are very powerful. We have used them in terms of the powers. We've done it other cases in terms of the orders that have been given by the staff and reinforced, in the case where we feel this is the necessary action if we don't see that there is a response.

But the Commission has reviewed the actions that have been taken by the staff and by the Commission in this case and we feel that it's an appropriate -- we've moved appropriately but in this case -- but do not underestimate that the Commission does understand the powers that are available to us and we will exercise them to protect people and the environment as necessary.

Thank you for giving us an opportunity to discuss that.

Are there any further questions that anyone has? Yes, Mr. Graham?

MEMBER GRAHAM: Yes. I just have one question to the licensee and that is with regard to whistleblowers. What accommodation do you have to encourage a whistleblower within your organization, if necessary, with regard to something they have seen and do you encourage that so that people do not feel that they're going to be penalized by doing that? Could you maybe give a little overview on whistleblowers?

MR. GITZEL: Tim Gitzel for the record.

Indeed, we try to promote a culture of self-reporting, but we also have protection for people that don't want to go through a public system.

We have an ethics hotline, confidential, that people can access if they have information that they want to put forward without going through the normal channels of supervision.

MEMBER GRAHAM: Is that -- are those concerns that may be expressed on an ethics hotline, are they shared with CNSC?

MR. GITZEL: I'm not sure we've had any that would be I'd say of interest to the CNSC but

certainly regarding our performance, but I don't know the answer to that because I don't know all of the complaints to the ethics hotline.

MR. SCISSONS: Kevin Scissons.

I do not recall if we've ever been contacted via CAMECO's ethics hotline on that issue, but we are available is -- and the workers on site know that, that we are available. We hand out our business cards. We are there -- stay on site. We have meetings with them and they are not only free to, but encouraged to, give us a call if they want to have -- and discuss anything and do it even informally or confidentially that even our regulations allow that. We can act accordingly and protect the information provided to us.

That is also available directly to us and we will take and have -- do the follow-up if there is an incident or information provided to us. We will do that and have done that independently.

THE CHAIRPERSON: Any further questions. Dr. Barnes?

MEMBER BARNES: Well, it's just a comment to Dr. Penna's last comment just for the record.

If I interpreted his comments correctly thinking that this flood on the mine came from a lake. There is no lake. It's essentially groundwater within the

lower parts of the Athabasca sandstone that's coming from -- it's captured within fractures, faults and perhaps potentially some pore space, so it's not introducing any life components. Perhaps micro-organisms, but there is no invertebrates, vertebrates, coming in with that water and perhaps very little silt or sand, except for that associated with a collapse of the roof systems and so on and then the erosion perhaps by rapidly massing water.

I'm sure staff can go into that in more detail in Saskatoon.

THE CHAIRPERSON: Dr. McDill.

MEMBER McDILL: Part of this question was answered a few moments ago by EQC but my question is to CAMECO.

All three intervenors raised issues of communication and we've just gone through another one. How are you communicating with the people of Saskatchewan?

MR. GITZEL: Tim Gitzel for the record.

We have several means of communication with our stakeholders and our northern neighbours. There are the environmental quality committees which Mr. McDonald represents here.

We have a group called the Athabasca Working Group that's been in place for many years. I don't know how many years now that the communities up

north and the companies meet on a regular basis to discuss issues, tour the mines, and -- so that's been working well.

We have a northern liaison office of our own. We've got staffed with several people that their sole responsibility is relations in the north.

We have Elders at our sites, Elders from the community that are available to our employees and others to discuss issues of interest to them.

And then we have our regular newsletter reporting. We support a communication called Opportunity North that distributes information on mining activities in the north.

So we have several different and numerous different ways of communicating with people in the north.

MEMBER McDILL: But can an intervenor who has a written submission, Eleanor Knight and Dr. Penna, get access -- answers to some of these questions that have come forward today that I think would be better answered by CAMECO?

MR. GITZEL: Tim Gitzel for the record.

We're certainly available to answer questions from Dr. Penna or any of the people that have questions of us; we're open to that.

They also, we know, access all of the

documentation that we file that is available. Usually they access it at the CNSC office in Saskatoon, but we're available to discuss any of the issues or questions that have come up today or any other time.

MEMBER McDILL: Thank you.

THE CHAIRPERSON: Well, thank you very much. It's been quite a long session today. With respect to this matter, I propose that the Commission confer with regards to the information that we've considered today and then determine if further information is needed or if the Commission is ready to proceed with a decision and we will advise accordingly.

We are late in our schedule. It is 12:30 so we will commence the OPG application at 1:30.

Thank you very much for attending. Special thanks to the EQC.