

**Canadian Nuclear  
Safety Commission**

**Commission canadienne de  
sûreté nucléaire**

**Public hearing**

**Audience publique**

**Cameco Corporation:  
Application for the renewal  
of the operating licence for  
the Key Lake uranium mill**

**Cameco Corporation:  
Demande visant le renouvellement  
de son permis d'exploitation pour  
l'usine de concentration d'uranium  
de Key Lake**

**June 11, 2008**

**Le 11 juin 2008**

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

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

**Commission Members present**

**Commissaires présents**

Mr. Michael Binder  
Mr. Alan Graham  
Dr. Moyra McDill  
Dr. Christopher Barnes  
Mr. André Harvey  
Dr. Ronald Barriault  
Mr. Dan Tolgyesi

Mr. Michael Binder  
Mr. Alan Graham  
Dr. Moyra McDill  
Dr. Christopher Barnes  
M. André Harvey  
Dr. Ronald Barriault  
M. Dan Tolgyesi

**Secretary:** Mr. Marc Leblanc

**Secrétaire:** Mr. Marc Leblanc

**General Counsel :**  
Mr. Jacques Lavoie

**Conseiller général :**  
Mr. Jacques Lavoie

1 --- Upon resuming at 1:55 p.m.

2 **THE CHAIRMAN:** Good afternoon. Here we are  
3 again.

4 And the next item on our Agenda is  
5 application by Cameco Corporation for the renewal of  
6 operating licence for the Key Lake Uranium Mill.

7 **M. LEBLANC:** This is Day One of the public  
8 hearing. The Notice of Public Hearing 2008-H-07 was  
9 published on April 11, 2008. A revised notice was  
10 published on May 6 to change the date of hearing for Day  
11 One.

12 Submissions from Cameco and CNSC staff were  
13 due on May 12<sup>th</sup>. I note that supplementary information  
14 has been filed by both Cameco and CNSC staff since the  
15 first publication of the agenda. Commission Member  
16 Document 08-H12.A is confidential and the Commission  
17 members have indicated there will no need to discuss in a  
18 closed session.

19 Mr. President?

20 **THE CHAIRMAN:** Thank you. So I understand  
21 that there's another presentation and Mr. Grandey, the  
22 floor is yours.

23

24 **Cameco Corporation:**

1       **Application for the**  
2       **Renewal of the operating licence**  
3       **For the Key Lake uranium mill**

4  
5       **08-H12.1 / 08-H12.1A**

6       **Oral presentation by**  
7       **Cameco Corporation**

8  
9                   **MR. GRANDEY:** Once again, Dr. Binder, thank  
10       you very much and good afternoon.

11                   For the record I am Gerry Grandey;  
12       President, Chief Executive Officer of Cameco Corporation.

13                   We're here for the Key Lake licence renewal  
14       and I'm pleased once again to have a number of Cameco  
15       staff with me; Tim Gitzel, Senior Vice President and Chief  
16       Operating Officer; David Neuburger, Vice President Mining.  
17       From Key Lake Operation Les Yesnik, General Manager; Kevin  
18       Himbeault, Superintendent, Safety, Health, Environment,  
19       and Quality; Brett Moldovan, Technical Superintendent,  
20       Technical Services; from the Mining Division Ken Gullen,  
21       Director, Technical Services; John Alsonso, Director,  
22       Compliance and Licensing; Pat Landine, Manager, Hydrology  
23       and Civil Engineering; and Jered Heigh, Superintendent,  
24       Safety & Radiation Systems Application.

25                   And again, from the corporate office, John

1 Jarrell, Vice President, Safety, Health, Environment and  
2 Quality; John Takala, Director, Safety, Health,  
3 Environment and Quality Systems; Liam Mooney, Senior Legal  
4 Counsel, Safety, Health, Environmental Quality and Alice  
5 Wong, Vice-President, Investor, Corporate and Government  
6 Relations.

7 And then we have a consultant with us from  
8 H.K. Mittal Associates, Hari Mittal.

9 So with that cast of characters I'll now  
10 turn it over to Les Yesnik who is the General Manager of  
11 the operation for his opening remarks.

12 **MR. YESNIK:** Good afternoon. My name is  
13 Les Yesnik for the record. I'm the General Manager at the  
14 Key Lake operation for Cameco Corporation.

15 The Key Lake operation is a uranium milling  
16 facility located on the southern edge of the Athabasca  
17 Basin, about 570 kilometres north of Saskatoon.

18 Key Lake began as a mining and milling  
19 operation with its first production in 1983 and by 1997  
20 two large deposits on the site had been milled and mined  
21 out.

22 In 2000, Key Lake began milling ore trucked  
23 to the site from the McArthur River mine which is about 80  
24 kilometres away.

25 To date, the Key Lake facility has produced

1 in excess of 350 million pounds of U308 over the past 25  
2 years.

3 During the proposed licence period Key Lake  
4 will continue to process ore from McArthur River while  
5 processing -- while proceeding with a number of  
6 revitalization projects to sustain the facility as  
7 Saskatchewan's largest uranium production centre.

8 Safety performance at Key Lake has been  
9 excellent during the current licence period. The number,  
10 frequency and severity of accidents were are low despite a  
11 significant increase in the contractor work at the Key  
12 Lake site.

13 Key Lake was recognized for safety  
14 performance on two occasions during the current licence  
15 term by Saskatchewan Mining Association and also received  
16 a merit award from the Workers' Compensation Board for  
17 maintaining a safe work environment.

18 Key Lake also performed well in terms of  
19 radiation protection. The average full-time equivalent  
20 dose for employees and contractors was reduced from 2.1 to  
21 1.7 millisieverts during the previous licence period and  
22 this represents a 19 percent decrease in exposure.

23 We also strengthened our radiation  
24 protection program with the addition of two dedicated  
25 staff members adoption of new technology and by

1           successfully addressing operational exposure issues.

2                       The packaging area was rebuilt to better  
3 control dust and we also improved equipment, revised  
4 operating maintenance and housekeeping practices in the  
5 Calciner area to better protect our workers.

6                       We continue to make progress on improvement  
7 of our quality management systems. Activity in each of  
8 the areas outlined in the overview presentation is  
9 underway at Key Lake.

10                      As indicated by staff's rating, the written  
11 programs and procedures are now in place and we are  
12 working on implementation and refinement to assure an  
13 effective system and adherence by people at all levels.

14                      We have committed the necessary resources  
15 and developed plans to assure that staff concerns are  
16 addressed and we expect fully to meet expectations by the  
17 latter part of 2008.

18                      Areas of specific focus in terms of quality  
19 management at Key Lake include application of standard job  
20 hazard analysis to ensure systematic assessment of health,  
21 safety, radiation and environmental risks of non-routine  
22 tasks. We also developed and implemented a formal change  
23 management and design control process to address  
24 challenges unique to the Key Lake operation. We are also  
25 planning for a safety culture assessment at Key Lake early

1 in the coming licence term as required under Cameco Safety  
2 and Health Management Program.

3 Implementation of Cameco's systematic  
4 approach to training is another key aspect of enhancing  
5 our management system and entrenching safety culture. The  
6 Key Lake training program is going -- is consistent with  
7 the corporate SAT. As described earlier in the overview,  
8 this system will manage and track training requirements at  
9 Key Lake and the other operations. We are currently  
10 working on implementation and revising our existing  
11 programs on a risk informed basis.

12 The Key Lake operation is also working to  
13 achieve compliance with the national fire code. The  
14 operation has in place fully trained and equipped fire  
15 fighting and emergency response teams that are capable of  
16 dealing with emergencies at our site. We also have an  
17 extensive fire detection and automated suppression  
18 systems. Our insurers are confident that our fire  
19 protection systems are sound and have underwritten our  
20 risk and we have done the work necessary to ensure the  
21 fire risk is low and we are continuing to complete the  
22 remaining work. Any new projects are subject to a third  
23 party fire assessment and this is a Cameco standard now  
24 across the corporation.

25 Bringing a 25-year old facility into

1 compliance with the national fire code certainly has its  
2 challenges. We will and we have taken many steps towards  
3 this goal and expect to be in compliance with the  
4 licensing requirements by the end of 2008.

5 Improving environmental performance was a  
6 priority at Key Lake throughout the current licence  
7 period. Overall, in each of the years of 2006 and 2007  
8 the reportable incident frequency has been reduced by 20  
9 percent compared to the past three year average.

10 A number of actions were undertaken,  
11 including enhancements to containment and ground water  
12 recovery systems at the mill, and a number of assessments  
13 and research studies to better understand technical issues  
14 related to our operations.

15 The frequency of spills at Key Lake was  
16 elevated by aging infrastructure in the Gaertner/Deilmann  
17 dewatering system and higher expectations for tracking and  
18 reporting of incidents both internally and externally.  
19 About half of the spills involved water with low  
20 contaminant levels leaking from piping associated with  
21 these systems which collect groundwater from around the  
22 tailings area and return it to the mill for treatment.

23 The effect of these incidents is mitigated  
24 by the fact that they occurred in the capture zone of the  
25 Deilmann Tailings Facility. Nonetheless, Key Lake is

1 developing a five year plan to renew the dewatering system  
2 as part of site revitalization. We also have an action  
3 plan in progress to change the operation of the water  
4 distribution system to reduce the number of spills.

5 The most significant incident during the  
6 current licence period was a spill of sulphuric acid in  
7 2006. That resulted in a significant development report  
8 to the Commission.

9 After initial remediation and thorough  
10 assessment in consultation with CNSC staff and  
11 Saskatchewan Ministry of Environment, it was determined to  
12 be a low risk event. All of the spills reported did not  
13 represent a significant risk to the environment.

14 While Key Lake effluent meets all  
15 regulatory limits, we continue to work towards targeted  
16 reductions of selenium and molybdenum that was set out in  
17 a licence condition applied following the mid-term  
18 hearings. Cameco was near completion of a project  
19 consistent with the action plan to reduce selenium and  
20 molybdenum loadings in David Creek drainage where the  
21 effluent from the Key Lake mill is discharged.

22 Phase I involved construction of a new  
23 circuit in the mill to precipitate additional molybdenum  
24 and selenium and placed the precipitate in the Deilmann  
25 Tailings Management Facility. Phase I process is being

1 commissioned and is expected to provide the necessary  
2 improvement to final effluent quality. The action plan  
3 has Phases II and III in the unlikely situation that Phase  
4 I is not sufficient. Reviews have been completed on these  
5 additional phases. Phase II is not technically feasible  
6 until site revitalization is complete. Studies completed  
7 on Phase III show only marginal improvement.

8 Addressing the Phase I implementation has  
9 been technically challenging. Cameco has invested more  
10 than \$16 million and has applied considerable operational  
11 resources and energy to solve this problem. Our research  
12 has advance scientific understanding of selenium and  
13 molybdenum removal mechanisms.

14 Equipment installation for Phase I  
15 construction was completed in mid-March and commissioning  
16 commenced. Commissioning progress has been slowed by  
17 technical problems and unplanned interactions with  
18 existing processes.

19 During early commission, we have observed  
20 the expected removal of molybdenum and are working through  
21 the technical challenges to enhance selenium removal. We  
22 plan to provide an update on the performance at our Day 2  
23 Hearing.

24 The Deilmann Tailings Management Facility  
25 is a world class facility for long-term tailing storage,

1           however, operating this facility has its share of  
2           challenges.

3                           One major challenge experienced during the  
4           current licence period is sloughing of the pit wall of the  
5           Deilmann facility. Three significant sloughing events  
6           occurred between 2003 and 2005 prompting a range of  
7           actions to better secure the facility, ensure safety of  
8           workers, identify and address the underlying causes. No  
9           further sloughing occurred since 2005.

10                           I will present the highlights of the  
11           actions taken to secure this facility.

12                           Cameco's responses included relocation of  
13           vulnerable infrastructure near the pit crest, installation  
14           of slope monitoring stations and restricting access to  
15           vulnerable pit crest areas.

16                           Early in 2005 we established a multi-  
17           disciplinary Deilmann Tailings Management Facility  
18           Advisory Committee. This included external experts to  
19           review a range of issues related to the safe operation and  
20           long-term performance of the facility.

21                           Several of the communities' recommendations  
22           have been implemented; the key one, being to hold the  
23           water level constant. This required increasing the  
24           capacity of Key Lake's reverse osmosis water treatment  
25           plant and this is now complete.

1                   We are confident that water level control  
2                   is a sufficient interim solution to prevent further events  
3                   as we continue to work on a remediation plan and  
4                   implementation schedule.

5                   Cameco has conducted extensive research  
6                   into pit wall stability as it is critical to the continued  
7                   operation and long-term performance of the tailings  
8                   facility. Most recently Cameco engaged experts to conduct  
9                   a detailed study to identify the mechanisms and conditions  
10                  that triggered the slope failures and assess the current  
11                  status.

12                  Cameco recently received the findings of  
13                  this work and it was reviewed with CNSC specialist staff  
14                  at recent meetings at our site. The slope failure  
15                  mechanisms are now understood by Cameco. It was also  
16                  recognized reducing the water level in the DTMF would  
17                  improve pit wall stability.

18                  Further, at that meeting, discussions  
19                  progressed on what suitable factor of safety would be to  
20                  ensure the stability of the facility.

21                  Other studies have been initiated to  
22                  identify remediation options and hydro-geological  
23                  modelling has been done to assess the effects of the  
24                  sloughed sand in the DTMF and the long-term performance of  
25                  the facility. Work continues in both these areas and will

1 be an area of focus during the coming licence term.

2 We acknowledge and agree with the intent of  
3 the proposed licence condition. Related to implementing  
4 long-term stabilization measures for the pit walls, we  
5 feel that the proposed date and the condition for the  
6 delivery of this plan is not attainable. Given the  
7 complexity of the work completed to date, the ongoing work  
8 in terms of defining potential mitigation options and the  
9 work needed to develop the logistics of each option, it is  
10 paramount that the final option selected does not  
11 jeopardize the safety of those individuals working on the  
12 mitigation. As well, we do not want to initiate a  
13 sloughing event.

14 We will communicate with the CNSC staff to  
15 develop a schedule and could present the status of this  
16 work more completely at the Day Two Hearing, if the  
17 Commission requires.

18 Management of waste rock from past mining  
19 operations at Key Lake and current operations at McArthur  
20 is a continuing challenge. We are managing our  
21 inventories in mineralised wastes of Key Lake and McArthur  
22 River while developing long-term solutions to control the  
23 potential long-term effects from these facilities.

24 Considering waste rock from Key Lake  
25 historical mining, our focus is on refining the site-wide

1 hydrogeological model to integrate source terms from all  
2 waste rock piles or storage facilities and the DTMF.

3 This holistic approach of management of  
4 long-term environmental interactions will provide for a  
5 more comprehensive and effective remediation strategy. It  
6 is important to note that all waste rock and ore storage  
7 facilities are hydraulically contained during operations.  
8 Groundwater in the area is collected in the active pump-  
9 and-treat systems.

10 Reclamation work continues during the  
11 current licence period. About 80,000 cubic metres of  
12 material was removed from the bentonite-lined portion of  
13 the original Key Lake ore pad, and it was used to blend  
14 down the McArthur River ore.

15 To prevent further seepage of ammonia from  
16 the mill, the floors within the ammonia crystallisation  
17 and yellow cake precipitation areas have been repaired and  
18 resealed and, as part of the overall systematic review of  
19 containment structures in the mining division, the ongoing  
20 maintenance and operational practices in the facility will  
21 be assessed. This work was initiated in 2007 following  
22 the Port Hope experience.

23 Other reclamation projects have been  
24 completed during the current term, including cleanup and  
25 elimination of various equipment lay down areas. Planting

1 of about 40,000 Jack Pine seedlings and re-vegetation  
2 trials of the Gaertner clean water waste rock pile was  
3 also undertaken.

4 We have begun work on reclamation of the  
5 Gaertner waste rock pile. This has included submission of  
6 a reclamation plan, field re-vegetation trials, and start-  
7 up of a slope flattening process. In 2008, Cameco has  
8 resumed slope-flattening activities and will soon begin  
9 large scale re-vegetation of the side slopes.

10 Cameco is confident and expects that the  
11 Key Lake operation will continue to serve as a regional  
12 mill for many years to come. A feasibility study is now  
13 in progress for revitalization of the facility to provide  
14 a sustainable operation with improved environmental  
15 performance.

16 In regard to tailings management, Cameco  
17 will be submitting an application within the next licence  
18 period to increase the tailings site to 466 metres above  
19 sea level. We understand that this will be an in-scope  
20 approval as it was previously assessed.

21 We are also conducting a comprehensive  
22 tailings option study that will look at a variety of  
23 options for increasing our tailings capacity. These  
24 options will include increasing the tailings elevation in  
25 the DTMF as well as new purpose-built facilities.

1                   During the coming licence period, Cameco  
2                   also plans to advance the production increase and the  
3                   recycling initiative which are subject to ongoing  
4                   environmental assessments.

5                   To summarize, we believe that the Key Lake  
6                   operation performed well in terms of safety, health and  
7                   environment during the current licence period. We  
8                   continue to build our knowledge of core technical aspects  
9                   of the operation and its interaction with the environment,  
10                  and we are enhancing our management systems to meet the  
11                  Commission expectations as well as our own.

12                  Thank you.

13                  **THE CHAIRMAN:** Thank you.

14                  I would like to move now to a presentation  
15                  from CNSC and I will turn to Mr. Henry Rabski, Acting  
16                  Director General of Directorate of Nuclear Cycle and  
17                  Facilities Regulation.

18                  Mr. Rabski, the floor is yours.

19

20                  **08-H12**

21                  **Oral presentation by**

22                  **CNSC staff**

23

24                  **MR. RABSKI:** Good afternoon, President  
25                  Binder, Commission Members. For the record, my name is

1 Henry Rabski, Acting Director General of the Nuclear Cycle  
2 and Facilities Regulation Directorate.

3 With me this afternoon are Mr. Kevin  
4 Scissons, Director of the Uranium Mines and Mills  
5 Division, and Peter Courtney, Project Officer with the  
6 Uranium Mines and Mills Division, along with the rest of  
7 the CNSC licensing team for the facility.

8 Cameco has applied for the renewal of the  
9 Key Lake Uranium Mill operating licence. This  
10 presentation contains CNSC staff's assessment of their  
11 application and staff's recommendation for renewal of the  
12 licence for a period of five years.

13 I will now ask Peter Courtney to present an  
14 overview of the information, the assessment and  
15 recommendations prepared by CNSC staff.

16 **MR. COURTNEY:** Good afternoon, Mr.  
17 Chairman, and Commission Members. For the record, my name  
18 is Peter Courtney, and I am the Project Officer for Cameco  
19 Corporation's Key Lake Operation.

20 We are here to recommend that the  
21 Commission renew Cameco's Key Lake Uranium Mill operating  
22 licence which is due to expire on October 31<sup>st</sup>, 2008.  
23 Cameco has requested a licence term of five years, and  
24 CNSC staff is recommending a term of five years.

25 The following presentation is an overview

1 of the information that was reviewed by CNSC staff in  
2 developing the recommendations being made today.

3 To begin with, I will review the activities  
4 that will be authorized by the proposed licence. Then I  
5 will go over the staff's assessment of the applicant's  
6 program content and implementation. This will include  
7 assessment methods, program content and implementation  
8 ratings, areas that do not meet requirements, and the  
9 overall assessment findings and conclusions.

10 CNSC staff is recommending a licence term  
11 of five years; I will explain why. Finally, CNSC staff's  
12 recommendations will be presented.

13 This slide shows an aerial view of the Key  
14 Lake milling operation. Note there are two tailings  
15 areas; the AGTMF, or Above Ground Tailings Management  
16 Facility, on the left side of the picture; and the DTMF or  
17 Deilmann Tailings Management Facility, on the right side.  
18 Also note the location of the mill area, which comprises  
19 the mill, powerhouse, acid plant, and wastewater storage  
20 and monitoring pots.

21 Notice the ore prep area, which comprises  
22 ore receiving, ore and mineralized waste storage, and  
23 crushing and grinding facilities.

24 There are two effluent discharge points  
25 indicated in the slide by asterisks. The one located west

1 of the mill discharge is treated mill water to the David  
2 Creek drainage. The other located south of the DTMF  
3 discharge is treated groundwater from the Gaertner pit  
4 area to the McDonald Creek drainage on the lower right.

5 Also identified on the slide is the  
6 Gaertner pit and one of three waste rock storage areas.  
7 Cameco is seeking approval to continue to carry out the  
8 activities indicated in this slide.

9 CNSC staff looked at 10 program areas and  
10 rated program content and implementation. The ratings for  
11 each program area are summarized in this table. What  
12 should be noted is that four program areas are assigned C  
13 ratings, indicating the program and/or implementation is  
14 below requirements. These are operations, quality  
15 management, environmental protection and training.

16 The radiation protection, non-radiological  
17 health and safety, emergency preparedness, safeguards and  
18 public information programs areas were assessed as meeting  
19 requirements. Security was assessed under a separate CMD.

20 There are no program or implementation  
21 ratings that are significantly below requirements or  
22 unacceptable.

23 I'd first like to review the program areas  
24 that receive below requirement ratings, followed by a  
25 review of those that met requirements.

1           The first program area assigned below  
2           requirement rating is operations. In particular,  
3           improvements are required in the waste management and fire  
4           protection sub-program areas.

5           With respect to waste management, Cameco  
6           has an acceptable program in place but in some instances  
7           has been slow to react to emerging issues and/or has not  
8           met its scheduling commitments.

9           Cameco has been more proactive lately and  
10          has completed some overdue projects. Meeting scheduling  
11          commitments continues to be a problem in regards to the  
12          Waste Rock Management Program.

13          With respect to fire protection, Cameco has  
14          completed two third-party audits for compliance with  
15          national fire code requirements, which have identified  
16          deficiencies. As well, a recent CNSC staff inspection of  
17          the facility found significant issues with fundamental  
18          fire protection practices.

19          However, Cameco is addressing these  
20          deficiencies on a priority basis and communicating with  
21          CNSC staff to resolve the deficiencies.

22          I would now like to show a few pictures  
23          that illustrate some of the waste management aspects  
24          discussed in the CMD.

25          In this slide, for example, note the

1 Deilmann Tailings Management Facility in its partially  
2 flooded state. The wall sloughing mentioned in the CMD  
3 and discussed further in the next slide has occurred in  
4 the areas indicated by the number "1".

5 Also note the Deilmann special waste area  
6 as indicated by the number "2". The CMD discusses an  
7 ongoing issue with the bentonite liner in this area and  
8 what is being done about it.

9 And note the areas identified by the number  
10 "3". These and one other waste rock area not in the  
11 picture are the subject of a licensed condition requiring  
12 Cameco to maintain and implement a waste rock management  
13 action plan.

14 Finally, note the close proximity of the  
15 waste rock and special waste areas to the partially  
16 flooded tailings facility. Contaminated seepage from the  
17 waste areas is within the cone of depression of the  
18 tailings facility, meaning that contaminants move toward  
19 and are captured within the tailings facility.

20 Contaminated groundwater can then be pumped  
21 to the mill for treatment.

22 This slide provides a closer view of the  
23 DTMF wall sloughing. During the 2004 re-licensing  
24 hearings, CNSC staff reported that significant sloughing  
25 of the DTMF walls had occurred resulting in a loss of 5

1 percent in overall tailing storage volume.

2 Significant sloughing continued until May  
3 2005 but thereafter was largely held in check by  
4 maintaining stable water levels in the DTMF.

5 In the January 2007 midterm and licence  
6 amendment hearing, Cameco reported that in total, 2.3  
7 million cubic metres of sand had sloughed into the  
8 facility, most of this prior to 2006, representing 19  
9 percent of lost tailing storage volume.

10 As a result, Cameco has determined that  
11 there is insufficient storage volume to accommodate all  
12 the tailings for the anticipated duration of this  
13 operation and has recently stated its intent to pursue  
14 additional storage options.

15 Note, however, that there is sufficient  
16 storage space to sustain the Key Lake operation for the  
17 proposed five-year licence renewal period.

18 CNSC staff is concerned that the sloughed  
19 sand may increase contaminant seepage from the DTMF by  
20 creating a high permeable zone through which the  
21 contaminants can travel. To address this concern, Cameco  
22 completed a two-year field program to better define the  
23 physical and chemical characteristics of the in situ  
24 sloughed sand tailings mass.

25 Cameco input these data into their

1 hydrogeological model and found that the revised model  
2 predictions were consistent with the earlier predictions  
3 of no significant environmental effects. However,  
4 uncertainties regarding the long-term tailings pore water  
5 upper bound source terms for arsenic are still being  
6 evaluated by Cameco.

7           During the 2004 re-licensing hearings,  
8 there was considerable discussion and some uncertainty  
9 about the mechanism for sloughing in the DTMF. The  
10 mechanisms for sloughing in the DTMF are now better  
11 understood and some mitigative measures have been  
12 implemented.

13           Stabilization of water levels has reduced  
14 the magnitude of sloughing to small amounts and there have  
15 been no significant sloughing events in the DTMF since May  
16 2005. However, CNSC staff has determined that water level  
17 control provides marginal stability only and is not a  
18 suitable long-term solution to the sloughing issue.

19           Cameco has identified preferred long-term  
20 stabilization options but have indicated they see no  
21 urgency in implementing them. Based on a review of data  
22 and literature and independent modelling, CNSC staff  
23 believes that immediate stabilization measures additional  
24 to water level control are warranted.

25           To ensure that this work moves ahead with

1 undue delay, CNSC staff is recommending a licence  
2 condition as described in Section 6.1 of the CMD.

3 The second program area assigned a below  
4 requirement rating is quality management. While the  
5 program now generally meets requirements, implementation  
6 of the program is not yet complete and therefore remains  
7 at a C rating.

8 CNSC staff has scheduled a Type 1  
9 inspection for October 2008 to specifically review aspects  
10 of implementation of the Quality Management Program.

11 The third program area assigned a below  
12 requirement rating is environmental protection.

13 While the program meets requirements, the  
14 program implementation is below requirement primarily  
15 because levels of moly and selenium in the mill effluent  
16 and its downstream receiving environment have not been  
17 reduced.

18 In previous hearings, a licence condition  
19 was added requiring Cameco to reduce moly and selenium  
20 levels in the Key Lake mill effluent.

21 Over the review period, selenium and moly  
22 loadings have increased with peak loadings occurring in  
23 2007. So there has not yet been any reduction.

24 However, in accordance with the approved  
25 action plan, the Phase I reduction measure involving a new

1 mill circuit is currently being commissioned. So moly and  
2 selenium reductions are expected shortly.

3 Cameco has completed an evaluation of Phase  
4 II and Phase III of the approved action plan in case Phase  
5 I doesn't reduce moly and selenium to the receiving  
6 environment objectives identified by CNSC staff.

7 This evaluation indicated that  
8 implementation of Phase II would raise ammonia levels in  
9 the final effluent above the current allowable limit.  
10 Consequently, CNSC staff are recommending that the  
11 requirement to implement Phase II be removed from the  
12 licence condition.

13 Phase III is currently reviewed as the  
14 preferred next reduction measure, if one is necessary.

15 In October 2006, a selenium workshop was  
16 held at Key Lake with the Environmental Quality Committee  
17 to discuss potential selenium effects in the David Creek  
18 drainage.

19 This slide shows the workshop attendees  
20 examining the mill effluent discharge, on the left, and  
21 Delta Lake, 10 kilometres downstream of the mill, on the  
22 right.

23 CNSC staff continues to monitor stakeholder  
24 interests in this situation. There has been no follow-up  
25 concern expressed by the EQC and an update meeting was

1 held with them at Key Lake on May 26<sup>th</sup>, 2008.

2 The province continues to monitor potential  
3 health -- human health effects related to moly and  
4 selenium intake via consumption of fish from the David  
5 Creek drainage. Since there has typically been no fishing  
6 in this drainage, human health effects are unlikely.  
7 Saskatchewan Ministry of Environment reports that there  
8 have been no issues identified to date.

9 The fourth program area assigned a below  
10 requirement rating is training. While the program meets  
11 requirements, implementation of a systematic approach to  
12 training program is incomplete. The current training  
13 program has been subject to many improvements and will  
14 continue to improve as SAT processes are implemented.

15 The risk of programs and performance  
16 falling significantly below requirements in the short term  
17 remains low. However, improvements are required to  
18 address identified weaknesses.

19 I'd now like to provide some highlights  
20 from CNSC staff's assessment of the program areas assigned  
21 "B" ratings that met CNSC requirements. Complete  
22 assessment details are provided in the CMD.

23 The first program area that meets CNSC  
24 requirements is radiation protection. The maximum five-  
25 year effective dose for a Key Lake worker during the 2001

1 to 2005 dosimetry period was 25.1 millisieverts compared  
2 with the limit of 100 millisieverts.

3 CNSC staff finds that the licensee is  
4 taking adequate measures to ensure radiation doses are as  
5 low as reasonably achievable.

6 The second program area is non-radiological  
7 health and safety. The safety record for the Key Lake  
8 operation during the review period was good and the very  
9 few lost time accidents reported were of a minor nature.

10 The third program area is emergency  
11 preparedness. Cameco has appropriate up-to-date  
12 procedures in place and it successfully conducted several  
13 emergency response exercises during the review period.

14 The fourth program area is safeguards.  
15 Cameco has acceptable procedures in place that provide  
16 prompt access of IAEA inspectors requesting complimentary  
17 access to the Key Lake site under Canada's additional  
18 protocol agreement with the IAEA. An IAEA inspection of  
19 Key Lake was conducted on June 3<sup>rd</sup>, 2008.

20 The fifth and last program area that meets  
21 CNSC requirements is public information. Cameco has an  
22 acceptable program for communicating with and responding  
23 to the concerns of residents and stakeholders in the area  
24 of the Key Lake operation.

25 As mentioned in the CMD, there are some

1 further details CNSC staff intend to provide in Hearing  
2 Day Two as follows.

3 One, Cameco has provided a lot of research  
4 information and a preliminary risk assessment but have not  
5 yet identified a preferred management option for the  
6 Deilmann north waste rock pile, as required.

7 A Cameco report is currently under review  
8 and further CNSC staff comment, including a possible  
9 licence condition adjustment, will be provided in the Day  
10 Two hearing.

11 Two; new preliminary decommissioning plan  
12 and preliminary decommissioning cost estimates were  
13 provided in March and April 2008 and are currently under  
14 review.

15 Further information on the status of this  
16 review will be provided in the Day Two hearings and the  
17 next slide will speak to the revised dollar amounts.

18 Three; CNSC staff has not been able to  
19 report on the performance of the Phase I moly selenium  
20 treatment measure as requested by the Commission in the  
21 January 25<sup>th</sup>, 2007 record of proceedings because it is  
22 still being commissioned.

23 Enough operating information should be  
24 available by Day Two hearing to provide a report at that  
25 time.

1           Other relevant information to CNSC staff's  
2 assessment of Cameco's application include financial  
3 assurance and cost recovery fees.

4           The preliminary decommissioning plan and  
5 financial assurance for the Key Lake operation has been  
6 revised and is currently under review by CNSC staff.

7           The current assurance in place is \$45.46  
8 million and the proposed new one is \$98.04 million.

9           Cameco is in compliance with the CNSC cost  
10 recovery fee regulations for its Key Lake operation.

11           Based on CNSC staff's assessment in the CMD  
12 and Cameco's commitment to address the identified  
13 deficiencies, CNSC staff conclude that: Cameco operated  
14 the Key Lake operation safely under the current operating  
15 licence; Cameco is qualified to carry on the activities  
16 that the proposed licence will authorize; Cameco made and  
17 are expected to make adequate provision for the protection  
18 of the environment, the health and safety of persons; and,  
19 Cameco made and are expected to make adequate provision  
20 for the maintenance of security and the implementation of  
21 international obligations.

22           With respect to the licence term, overall,  
23 the programs are in place and the licensee has  
24 demonstrated -- has a demonstrated history of competence.  
25 Therefore, a longer licence term is warranted.

1                   Based on the criteria set out in CMD 02-  
2 M12, CNSC staff recommends that the licence be issued for  
3 a five-year term to cover ongoing milling operations which  
4 are expected to continue for another 20 to 25 years.

5                   To address the need to keep the Commission  
6 informed, CNSC staff will provide -- will report on the  
7 performance and status of the facility at the midpoint of  
8 the proposed licence term.

9                   To conclude, CNSC staff recommends that the  
10 Commission accept CNSC staff's assessment that the  
11 applicant is qualified to carry on the activities that the  
12 licence will authorize, and will make adequate provision  
13 in carrying out those activities for the protection of the  
14 environment, the health and safety of persons, and the  
15 maintenance of national security and measures required to  
16 implement international obligations to which Canada has  
17 agreed.

18                   Accept the recommended changes to the  
19 current licence; accept staff's assessment that the  
20 licence renewal is not a CEAA trigger and that an  
21 environmental assessment is not required, and issue the  
22 proposed uranium mill operating licence for a five-year  
23 term.

24                   I would now like to turn it back to Mr.  
25 Rabski.

1                   **MR. RABSKI:** This concludes our  
2 presentation this afternoon. Staff is available to answer  
3 any questions the Commission members may have.

4                   Thank you.

5                   **THE CHAIRMAN:** Thank you.

6                   Let me open up the floor for questioning  
7 and starting with Monsieur Harvey.

8                   **MEMBER HARVEY:** Merci, Monsieur président.

9                   In page 17 of the staff submission, the  
10 paragraph before the last one:

11                                 "However, staff determine that past  
12                                 and ongoing selenium and molybdenum  
13                                 loading on the David Creek plant due  
14                                 to mill effluent pose an unreasonable  
15                                 environmental risk and recommend that  
16                                 the Commission amend Key Lake and add  
17                                 a condition."

18                   I just want to have more -- this is not  
19 linked to the sloughing or there is no direct link with  
20 sloughing and the quality in the effluent; am I right to  
21 think like that?

22                   **MR. SCISSONS:** It's Kevin Scissons.

23                   Yes, you're right; those are two different  
24 issues.

25                   **MEMBER HARVEY:** Two different issues; okay.

1 I'll go directly to the sloughing then in that condition  
2 on page 29 of 6.1.

3 The last sentence, "shall develop" -- I  
4 won't read all this but I find it difficult to see how  
5 that condition will be monitored and it seems to me that  
6 it's -- a condition would be something very spatial and  
7 that you could say, okay, it's held up or not, it's made.  
8 The condition will be met if there is a very specific  
9 result at the end.

10 But you just say develop and implement and  
11 then for timely installation and it looks quite large.  
12 Could you elaborate on that condition?

13 **MR. SCISSONS:** Kevin Scissons, Director of  
14 Uranium Mines and Mills Division.

15 One key thing on this particular condition  
16 is actually -- though it's been an ongoing situation it  
17 still is an emerging path forward. Due to the timing of  
18 this licence renewal we are only in a position to  
19 recommend that this action plan be proposed and with  
20 further consultation with staff and our specialists and in  
21 addition with the licensee's specialists to develop that  
22 path forward.

23 But we are not in a position to recommend a  
24 definitive action of A, B, C because the issue is still  
25 under that level of study and we had a recent trip up to

1 the site and in consultation with the licensees,  
2 consultants they brought up to the site, we recognize the  
3 issue -- they are not at that point of that final solution  
4 per se.

5 But we are in a position to recommend that  
6 this -- over the next number of months and we're prepared  
7 to negotiate that final date that the actual proposed plan  
8 come forward and under specialist review to determine if  
9 that's acceptable. We're not in a position to say what  
10 the plan is today.

11 **MEMBER HARVEY:** But doing so, if you  
12 recommend such a condition do you have some idea or that a  
13 solution could be found in a timely manner? Do you have  
14 the staff -- some ideas of how it could be resolved?

15 **MR. SCISSONS:** It's Kevin Scissons.

16 The whole thing on developing that action  
17 plan and the schedule will be a key outcome of that and we  
18 do have specialists available and one of our staff  
19 members, if you'd like more details on that but we would  
20 need to review and look at that, the whole plan, and  
21 assess it with our specialists and staff.

22 If you'd like a brief explanation of what  
23 some of those expectations would be, we can bring this  
24 question further back to our specialist staff member.

25 **MEMBER HARVEY:** No, I was just asking the

1 question because if you recommend such a condition it has  
2 to be something that is visible. So if you do so I  
3 suppose you have looked at it and ---

4 **MR. SCISSIONS:** Yes. I apologize; perhaps  
5 I've not been clear.

6 There are a number of solutions or options  
7 that are available and it's a matter of now bringing those  
8 down to which are the most viable, what is the timeline  
9 and that action and implementation plan and how critical  
10 it is.

11 In the interim the managing of the water  
12 level in the pit minimizes, we believe -- tends to  
13 minimize further additional sloughage for now and as the  
14 options are now narrowed down and then a proposed timeline  
15 to address them is what the focus will be in the future.

16 Are there options available to remediate  
17 this; yes, we believe there are. What those are and how  
18 they'll be implemented is the outcome of this plan and the  
19 further assessment once that has all been brought forward  
20 to us.

21 **THE CHAIRMAN:** Let me ask it differently.  
22 Is Cameco willing or ready or able in Day Two to commit to  
23 some future date of actually doing this?

24 **MR. NEUBURGER:** Dave Neuburger for the  
25 record.

1                    Cameco -- we share the concern over the  
2                    Deilmann Tailings Management Facility. So in that sense  
3                    we fully agree with the spirit of the licence condition in  
4                    recognizing the importance of having an action plan in  
5                    place.

6                    The reason why at this point in time we're  
7                    not comfortable with a date on it is we're still scoping  
8                    options regarding what remediation of that Deilmann TMF  
9                    could be.

10                    Without understanding what the options are  
11                    we have -- we don't understand what the timelines for  
12                    completing that work would be so we don't feel comfortable  
13                    now with having a date. We do feel comfortable to the  
14                    point of your question that by Day Two we'll have enough  
15                    understanding that we should be able to have a date in the  
16                    future when we would have an action plan that we'd be  
17                    ready to commit to.

18                    It wouldn't be that by Day Two we've  
19                    completed all our work but we'll understand enough that a  
20                    firm plan could be in place by a future date.

21                    **THE CHAIRMAN:** So if that's the case you  
22                    may want to recommend a different -- a little bit more  
23                    precise kind of firm action plan with some dates in it?

24                    **MR. RABSKI:** Henry Rabski for the record.  
25                    We will await for their comments to

1 solidify that date for Day Two.

2 **MEMBER HARVEY:** It's two things to have a  
3 date for the action plan and dates in the action plans.

4 Just another question about the reduction  
5 of molybdenum and selenium; I'm a little bit mixed up with  
6 those three phases you were talking about in the  
7 beginning.

8 If my understanding was correct you found  
9 great hopes with the Phase I, and Phase II wouldn't be a  
10 solution and Phase III would not add much to Phase I. Am  
11 I correct to say that or could you ---

12 **MR. NEUBURGER:** Dave Neuburger for the  
13 record.

14 In a nutshell you have it, yes, you are  
15 correct. Phase I is what we pin most of our hopes on;  
16 that's what all our work has been on so far, lab work,  
17 test work, physical work in the plant. Phase II and Phase  
18 III have been study work in terms of modelling what the  
19 impacts would be to the environment and absolutely, Phase  
20 II, we could not implement in our current operating  
21 circumstances because it would create problems with  
22 another contaminant, ammonia in our effluent.

23 Phase III could have some marginal impact  
24 but it's something we certainly, as you say, we would see  
25 not moving forward on until we know for sure whether Phase

1 I is going to meet the expected reduction in molybdenum  
2 and selenium.

3 **MEMBER HARVEY:** More than that, I think  
4 Phase 3 could require an EA. So just postpone the  
5 solution to it for months, maybe years.

6 **MR. NEUBURGER:** Dave Neuburger for the  
7 record.

8 I think we understand and assume that Phase  
9 3 would require an environmental assessment as well.  
10 You're absolutely correct.

11 **MEMBER HARVEY:** Okay. Thank you.

12 **THE CHAIRMAN:** Thank you.

13 Dr. McDill.

14 **MEMBER MCDILL:** Thank you.

15 My first question is related to dosimetry  
16 on page 6 of 29. I wonder if, in general terms, Cameco  
17 could describe how this facility fits in terms of full  
18 time equivalent dose when compared to McArthur and Rabbit  
19 Lake and then perhaps other -- I don't know, should we  
20 say, other facilities within the Cameco stable for the  
21 lack of another word to describe it?

22 **MR. NEUBURGER:** Dave Neuburger for the  
23 record.

24 I'll ask John Takala to speak to that.

25 **MR. TAKALA:** John Takala for the record.

1                   Key Lake's full time equivalent doses would  
2                   be lower than McArthur River and Rabbit Lakes and other  
3                   facilities it would be -- I'm just trying to recall off  
4                   the top of my head where our American in situ recovery  
5                   operations would be. They'd be not too different, about  
6                   the same, and the operations in Ontario, again, the  
7                   averages would probably be in the same order, plus or  
8                   minus a millisievert or two.

9                   **MEMBER McDILL:** Has there been a corporate-  
10                  wide look at full time equivalent dosages within Cameco  
11                  corporate envelope?

12                  **MR. TAKALA:** Yes, we look at that. I just  
13                  don't have the data handy.

14                  **MEMBER McDILL:** Is staff able to comment on  
15                  that?

16                  **MS. GUNNING:** Cherry Gunning for the  
17                  record, R.P. specialist.

18                         For 2007 the full time equivalent doses for  
19                         all the work groups together at Key Lake was 1.58, for  
20                         Rabbit Lake, 3.49, and for McArthur River, 2.27.

21                  **MEMBER McDILL:** Thank you.

22                         My second question is with respect to sump,  
23                         ceiling and floor repairs. Was this undertaken as a  
24                         result of a Cameco decision to examine all sumps and  
25                         floors?

1                   **MR. NEUBURGER:** Dave Neuburger for the  
2 record.

3                   I'll ask this question to be fielded by two  
4 people because there's two parts to the answer. Some of  
5 the work at -- a lot of the work that you're referring to  
6 at Key Lake was actually done and predates the Port Hope  
7 groundwater contamination issue. But I'd also be -- so  
8 Les will speak to that work, but I'd also first ask Ken  
9 Gullen to speak to some of the initiatives we've taken at  
10 the mining division to assess -- because we're still  
11 mostly in the assessment phase -- our sumps and  
12 containment structures at all the mining division  
13 facilities in response to the taproot from Port Hope.

14                   So first to Ken Gullen.

15                   **MR. GULLEN:** Ken Gullen for the record.

16                   When the taproot became available from the  
17 Port Hope incident we distributed that report to all of  
18 our mining operations and milling operations in Northern  
19 Saskatchewan. We then organized -- from a corporate  
20 oversight perspective we organized a teleconference to  
21 discuss and develop an action plan around which we would  
22 have a team of people review not only the containment  
23 structure but also the process aspects for all the mill  
24 and mine sites.

25                   That action plan was to be developed by the

1 end of January and at that time we were going to set up  
2 this team to investigate. Unfortunately the seepage  
3 incident at Rabbit Lake occurred on January the 26<sup>th</sup> which  
4 diverted our attention, but we did have that team go and  
5 do the investigation to start at Rabbit Lake and we have  
6 then moved on to other sites, and all sites will be  
7 reviewed this year.

8 **MR. YESNIK:** Les Yesnik for the record.

9 Just to add to Ken's points, I'll answer my  
10 question in two parts, the first being what we did prior  
11 to the Port Hope learnings and what we're doing currently.

12 Prior to the Port Hope incidents, at Key  
13 Lake we had a program of ensuring that we were improving  
14 out containment structures. Through preventative  
15 maintenance we had upgraded -- I'll give three examples.  
16 One is the crystallization area. We replaced the entire  
17 concrete floor with stainless steel and by doing that we  
18 eliminated the pathways, and that included the sump area.  
19 We completely contained and encased the whole bottom floor  
20 of sump bases and everything in stainless steel.

21 The second area was in the solvent  
22 extraction area where we recognized through a 2004 spill  
23 risk assessment that was done over our whole site that we  
24 had a pathway through the environment directly under these  
25 SX solvent extraction settler bases. So we went into a

1 program of backfilling those bases completely with  
2 concrete and redoing the sumps.

3 In addition to that, the yellow cake area,  
4 early in 2007 we commenced a program of redoing the  
5 complete containment within that building, the lower  
6 containment structure.

7 So that's just an example of what we were  
8 doing prior to the main learnings from Port Hope.

9 Following the Port Hope experience  
10 certainly we recognized that we needed to also maybe get a  
11 fresh set of eyes to our site to look at our concerns or  
12 potential risks so we brought in experts who looked at  
13 buildings of highest risk, and I'll refer to our acid  
14 plant, again our yellow cake area and solvent extraction  
15 and we have done complete containment reviews. Those  
16 reports are available and we're working through the issues  
17 on a risk-based priority basis.

18 **MEMBER MCDILL:** Does staff have anything to  
19 add to that?

20 Thank you.

21 **MR. SCISSONS:** It's Kevin Scissons.

22 No, we're aware of it and we concur there  
23 is an action plan for it on priority basis and risk areas  
24 at all their facilities, including their team out of the  
25 -- led out of the Cameco head office, as well as the site

1 activities done to remediate the key areas has been  
2 undertaken and is ongoing.

3 **MEMBER McDILL:** And do you sense this  
4 corporate-wide initiative or corporate-wide action is  
5 solid and stable and deep -- I guess deep ---

6 **MR. RABSKI:** Henry Rabski for the record.

7 This is an issue that comes out of the  
8 Ontario Cameco facilities and has been discussed with that  
9 management team and I'm pleased to hear that it's crossing  
10 over across Cameco operations.

11 This is an aging issue of facilities,  
12 vintages 30 to 40 years, and in the case of the Ontario  
13 division we have facilities that are even older.

14 So in one of our management meetings,  
15 representatives from the senior office at Cameco were  
16 present and made a commitment to participate on this aging  
17 issue that we, as the CNSC, will be moving forward with,  
18 with respect to fuel cycle facilities.

19 The mining facilities also want to be  
20 included in this initiative because they see the  
21 importance of aging facilities, aging infrastructure  
22 associated with their facilities. So we're pleased to  
23 hear that the mining people want to participate in this  
24 worldwide international assessment of aging infrastructure  
25 on facilities, including mines.

1                   **MEMBER McDILL:** Thank you.

2                   One last question on the same page with  
3                   respect to the -- we had a CMD on the sulphuric acid  
4                   spill. But was the clean up and replacement of the high  
5                   density polyethylene liner, is that something that is  
6                   limited only to this facility? Is there any other place  
7                   where that could be a problem?

8                   **MR. NEUBURGER:** Dave Neuburger for the  
9                   record.

10                  I can only indicate to you that we do  
11                  inspect as part of our preventative maintenance at all our  
12                  mining facilities liners and sump -- HDP liners in our --  
13                  that we use in outside exterior containment areas and ore  
14                  pads; we do inspect them on an annual basis. There's PMs  
15                  around it and any tears and punctures are repaired  
16                  typically as part of those PMs. So that is common to  
17                  Rabbit Lake, McArthur River, Key Lake and Cigar Lake as  
18                  well.

19                  I think from those PMs we would expect to  
20                  see if we've got any issues where we have a major breach  
21                  of containment on those liners.

22                  **MEMBER McDILL:** Thank you for completing  
23                  this.

24                  I'll ask staff if they have any comments?

25                  **MR. COURTNEY:** Peter Courtney, for the

1 record.

2 I concur with the comments that are made on  
3 the liner inspections on a regular basis and damage  
4 normally due to ice falling is done. So I would concur.

5 **MEMBER McDILL:** Thank you, Mr. Chair.

6 **THE CHAIRMAN:** Thank you.

7 Dr. Barriault, please.

8 **MEMBER BARRIAULT:** Thank you, Mr. Chairman.

9 If I could ask the CNSC staff to draw their  
10 attention to page 21 of your presentation. The second  
11 paragraph states that:

12 "CNSC staff issued an enforcement  
13 letter with respect to the health,  
14 safety of contract workers and the  
15 licensee's responsibility under  
16 Section 12(1)."

17 Could you care to elaborate on the contents  
18 of this?

19 **MR. SCISSONS:** It's Kevin Scissons  
20 speaking.

21 Yes, that letter was actually issued my  
22 signature to our licensees. It was to address and  
23 identify not only -- of course, there was a fatality we're  
24 talking back of October 2006, but we were looking at --  
25 what we were looking at is really a kind of an increasing

1 trend in contractor incidents. And we wanted to reinforce  
2 it with the licensee that they are responsible for  
3 everybody's health and safety on the site, not only their  
4 own employees but, of course, contractors as well and, as  
5 a matter of fact, even inspectors that visit the site, so  
6 the whole responsibility for the facility.

7 And we want to bring that back to the  
8 licensee's attention that their incidents and accidents in  
9 relation to the contractors was an increasing trend that  
10 was in our view unacceptable.

11 And this enforcement letter demanded an  
12 action plan and we actually followed up with a second  
13 letter on it for more details, to be more specific, and I  
14 believe it was spoke to earlier in the day from the senior  
15 management of Cameco as how they have addressed that and  
16 took that action on seriously and have move forward to  
17 bring that under greater control and action on contractor  
18 oversight.

19 **MEMBER BARRIAULT:** Does this actually  
20 concern Key Lake or McArthur?

21 **MR. SCISSONS:** Yes. Kevin Scissons.

22 It was a trend in our view across -- with  
23 all our licensees. We even confirmed we put this letter  
24 over to AREVA as well but the focus was really was at  
25 Cameco sites and all of their activities because overall,

1 their approach to managing contractors was very similar  
2 across the organization and at the facilities. And it's  
3 that overall trend that we found was something to be  
4 addressed with and though one site maybe a little higher  
5 than the others, it was the overall increasing trend that  
6 we believed clearly deserved greater attention and that  
7 enforcement action.

8 And we are pleased to say that we now have  
9 seen some results and we're looking to see that success  
10 continue on that oversight of all workers on site, Cameco  
11 and/or contractors.

12 **MEMBER BARRIAULT:** Could I ask Key Lake to  
13 comment on the outcome of this?

14 **MR. YESNIK:** Les Yesnik, for the record.

15 Certainly at Key Lake one of our main  
16 measures of success is insuring a safe workplace and that  
17 bridges not just the Cameco employees but certainly our  
18 contract groups.

19 With the Contract Management Program that  
20 has been developed as a corporate standard and the  
21 standard that we have developed on the site to ensure  
22 compliance to that program, we have certainly taken what  
23 was a good program and really added some real greatness to  
24 it; specifically in the area of ensuring orientation for  
25 contractors, ensuring that when a contractor comes to

1 site, there is a site contact at all times designated and  
2 the expectations for our ALARA principles and through our  
3 programs are understood, that they are in fact through  
4 their activities keeping radiation as low as reasonably  
5 achievable.

6 Any environmental interaction is also being  
7 managed and their safety -- the expectations on safety  
8 with our contractors is equally as high as for our own  
9 personnel. So there is an expectation that a fully  
10 supportive contractor, general contractor will have a  
11 safety program, they will be in compliance with a  
12 supported safety program and we will audit the program  
13 that they are abiding by.

14 In addition to that, we conduct safety  
15 stand-downs with our contractor group. We ensure that  
16 their level of awareness, if we see that there is a number  
17 of incidents, that there is a trend, it could be slips and  
18 falls or something along that line where we will cause  
19 them to stop, refocus their efforts and provide Cameco  
20 with assurance that they're going to abide by what our  
21 standards are.

22 **MEMBER BARRIAULT:** From reading this,  
23 really it states that the standards are in the process of  
24 being implemented. Have they been implemented already or  
25 is it just in the process of being implemented?

1                   **MR. NEUBURGER:** Dave Neuburger, for the  
2 record.

3                   Just I'll -- when we -- subsequent to the  
4 fatality at McArthur River, we very quickly moved to  
5 implement a mining division standard around our  
6 expectations for contractor safety. This was while the  
7 Cameco corporate-wide program was still being reviewed and  
8 updated.

9                   The standard has been fully implemented at  
10 the Mining Division sites. Implementation of some small  
11 changes related to the corporate program expectations are  
12 still taking place in 2008.

13                   But at all of our sites, as Les described  
14 for Key Lake in the Mining Division, we have implemented  
15 the aspects of the -- that were defined in the Mining  
16 Division standard and generally the standard is, if  
17 anything, a little more specific than the program.

18                   I also just would like to throw in one  
19 additional example from another site, less talked about,  
20 the safety stand-downs that we sometimes use as well which  
21 isn't a part of the standard or the program but it's a way  
22 of -- it demonstrates the urgency and the importance that  
23 Cameco management places on safety to the workforce if we  
24 sometimes feel that there is an unfavourable trend.

25                   And I'll draw an example from Rabbit Lake,

1 a week and a half ago actually, when -- over the weekend  
2 when senior Cameco management wasn't on sit but the next  
3 level down of Cameco site management was concerned about  
4 an increasing trend of safety infractions from one of our  
5 contractors on the site, and these were -- they had not  
6 progressed to the point of being incidents where people  
7 got hurt. They were safety infractions, personal  
8 protective equipment, ladder safety, working under cranes,  
9 those kinds of items.

10 The management on site acted quickly and  
11 decisively. They actually shut down -- stood down all  
12 operations of that contractor for, in the end, a two-day  
13 period and required that the contractor senior management  
14 come to site and talk with all contractor employees of  
15 that contractor on site, review safety requirements and  
16 also put an action plan in place to satisfy the site  
17 management.

18 So I take great comfort when I hear that  
19 that's happening two or three levels down in our  
20 management and that we clearly are recognizing and  
21 understanding, the importance and the expectation we have  
22 that we are responsible and accountable for the management  
23 of safety of everyone on the sites.

24 **MEMBER BARRIAULT:** Thank you.

25 My next question, if I may, Mr. Chairman,

1 is to CNSC staff. The next paragraph down states that:

2 "Saskatchewan Labour has indicated the  
3 level of compliance observed at the  
4 Key Lake operation during the review  
5 appeared to have met requirement."

6 But it also states that:

7 "CNSC staff conclude that the  
8 occupational safety programs meet  
9 requirement..."

10 Although you did not audit the program  
11 yourselves.

12 **MR. SCISSONS:** Kevin Scissons.

13 Yes, actually, it's a key component and I'm  
14 glad you introduced the term, the Saskatchewan Labour,  
15 shortened name, they're actually called Ministry of  
16 Advanced Education, Employment and Labour.

17 We actually have a representative from  
18 Saskatchewan Labour I believe in the Saskatoon office,  
19 Geoff Alderman, the inspector. He works with us at a  
20 number of the sites, and that is another area of this  
21 important thing on occupational worker health and safety.  
22 It's what we call our regulatory defence in-depth.

23 We work with the -- in an harmonized  
24 approach with our provincial counterparts. And as a  
25 matter of fact, an Occupational Health and Safety Program

1 is actually one of the requirements of their legislation  
2 as well, and we look to them as key players and advisors  
3 on that.

4 I'm not sure if Mr. Alderman is available  
5 or would like to speak to the issue but, clearly, the  
6 expertise of the provincial government is here and  
7 available and it's probably best they speak to that.

8 **THE CHAIRMAN:** Why don't we take this  
9 opportunity to get the Saskatchewan government involved in  
10 this? Are you there?

11 Just testing the technology here.

12 **MR. ALDERMAN:** Geoff Alderman speaking for  
13 the record. Can you hear me?

14 **THE CHAIRMAN:** Yes, go ahead.

15 **MR. ALDERMAN:** I guess in Key Lake, in  
16 particular, overall we are satisfied with the cooperation  
17 we receive from Cameco. If we do come across a concern or  
18 an issue, they usually jump to the pumps and address it  
19 right away.

20 As regards the particulars of the Health  
21 and Safety Program, I'm not actually the inspector there  
22 but I know from my own inspections, we do go through this  
23 Health and Safety Program with them. They are expected to  
24 fill it out and we review it on a periodic basis, maybe  
25 every two years with them, and I guess in this case Lorne

1 Yelman (phonetic), the Inspector, has indicated his  
2 satisfaction with it.

3 Does that answer your question?

4 **MEMBER BARRIAULT:** Yes, thank you.

5 But I guess my next question really is to  
6 CNSC staff. They're responsible for giving the rating to  
7 Cameco, and I can understand why they can't get an "A"  
8 because they don't determine the standards themselves.  
9 They pass it on to you.

10 So you are going to have to give Cameco an  
11 "A" rating on their occupational and safety staff as  
12 opposed to CNSC staff.

13 **THE CHAIRMAN:** No comments from  
14 Saskatchewan?

15 (LAUGHTER/RIRES)

16 **MR. ALDERMAN:** I would happily give Cameco  
17 an "A" rating if you'd let me.

18 (LAUGHTER/RIRES)

19 **THE CHAIRMAN:** Well, while we've got the  
20 Saskatchewan Government on, I understand there's a Ms.  
21 Vanessa Bourhis online also?

22 **MS. BOURHIS:** Yes, that's correct.

23 **THE CHAIRMAN:** Well, here's your chance to  
24 input into your assessment of the environmental quality  
25 assessment here of Cameco.

1                   **MS. BOURHIS:** Vanessa Bourhis, Ministry of  
2 the Environment.

3                   Currently, we are satisfied with their  
4 commitments that they've made. They are operating within  
5 the terms of their current provincial operating approval,  
6 and they're ensuring that the environment is adequately  
7 protected from our point of view.

8                   **THE CHAIRMAN:** Thank you for that and I  
9 understand we are going to see you in Saskatchewan for Day  
10 Two?

11                   **MS. BOURHIS:** Yes.

12                   **THE CHAIRMAN:** Good, thank you.

13                   Go ahead.

14                   **MEMBER BARRIAULT:** That's fine, Mr.  
15 Chairman. Thank you.

16                   **THE CHAIRMAN:** Mr. Graham?

17                   **MEMBER GRAHAM:** Thank you, Mr. Chair.

18                   A couple of just general questions; first,  
19 what's the size of the footprint of the Key Lake Operation  
20 roughly? I mean you show that you planted 40,000 trees on  
21 an area which would be probably an area of less than 20  
22 hectares, and I just want to get a relevant comparison as  
23 to is that one percent of the site or a quarter of a  
24 percent of the site or what?

25                   If you don't have that, maybe you can get

1           it for us in Day Two because I don't want to prolong the  
2           questioning.

3                           The other question though is or the other  
4           concern I have is when I read the CNSC document and I've  
5           listened to your -- read your document, listened to your  
6           presentation today, there seems to be quite a distance  
7           apart.

8                           You ended up in four categories with a "C"  
9           rating, especially in operations with two "C"'s, and I am  
10          concerned that knowing that to process the extra 1.3  
11          million kilograms from Port Hope and Blind River down the  
12          road, you are going to have to come, as we talked this  
13          morning, with probably an EA.

14                           There seems to be a lot of room for  
15          improvement and I am just concerned of the speed in which  
16          you are going to reach not "A"'s -- we're not looking for  
17          "A"'s, looking for "B"'s -- and not only using "B"'s as  
18          benchmarks but reading the CNSC document, you had some  
19          problems.

20                           We heard just a moment ago from  
21          Saskatchewan Environment saying that they were satisfied,  
22          but yet, under Environmental Protection, there was a "C".  
23          I read in one area that you had 17 spills -- 17 spills  
24          over a certain period. You are having problems in plumes  
25          and so on, and the Davis Creek -- the loading at Davis

1 Creek and so on.

2 These are all, I would think, would be  
3 things that need a plan of action and we did talk about  
4 plans of action a while ago with some other colleagues.

5 But in Day Two, I just feel that  
6 environmental, especially in the environmental aspects of  
7 environmental protection, you have quite a ways to go in  
8 implementation, and if you would like to comment. I don't  
9 want to get repetitious, but there is a concern there  
10 especially with the fact that you will be coming back with  
11 an EA because your plans show that.

12 How quickly can you do the implementation  
13 with regard to environmental protection?

14 **MR. NEUBURGER:** Dave Neuburger, for the  
15 record.

16 I will provide some introductory remarks  
17 and then perhaps ask Les and Kevin to be prepared to speak  
18 to and perhaps Brett to speak to parts of it as well and  
19 see where it goes.

20 What I wanted to emphasise to you is I was  
21 asked this morning how -- whether we were expecting or  
22 surprised by the cease in that we broadly saw it, and I  
23 think my response was that, you know, we've got good  
24 communication. We have good indications and good  
25 discussion. We understand where our difficult areas are;

1       where -- I should say -- where our work areas that are  
2       continuing improvement areas are.

3               So we generally weren't surprised, but I  
4       would comment on environmental protection. I would say  
5       the site people were probably quite disappointed by a "C"  
6       in that area. And I say that because we have done a  
7       tremendous amount of work and I think we recognise sitting  
8       back and reflecting that we're not there yet. So a "C"  
9       perhaps isn't surprising, but it masks the amount of work  
10      that's been done on improving in that area.

11              We've done -- one of the areas that was of  
12      concern at last licensing round was the significant number  
13      of environmental spills and environmental incidents. And  
14      I can assure you that the Key Lake management team, Les  
15      and his team, have taken that on in the last few years  
16      very, very seriously and it has been a very strong focus  
17      of accountability that they've driven through the site and  
18      sometimes worked with staff to have staff support the  
19      message to employees at site to how important it is to  
20      control our environmental impacts.

21              So a strong focus has been placed at the  
22      site on reducing environmental incidents globally. That's  
23      -- it's not entirely seen by the spills but when you add  
24      spills and what we call environmental incidents, which are  
25      releases to secondary containment, there has been a 20

1 percent reduction made each of the past couple of years.

2 We have put huge effort into the moly  
3 selenium reduction in the last couple of years and that's  
4 -- and we are now where an action plan has been put in  
5 place. We have been working very hard at construction and  
6 now commissioning of the moly selenium circuit.

7 Perhaps what I'll do here is ask Brett  
8 Moldovan to give you some flavour as to where the initial  
9 results are going on that and what the status of the moly  
10 selenium reduction piece is, because there has been good  
11 progress that's being made there right now.

12 **MR. MOLDOVAN:** Thanks, Dave. For the  
13 record, Brett Moldovan.

14 Yes, I will just provide a brief update on  
15 the progress of the moly selenium removal project. The  
16 engineering for that project was initiated in 2006, and it  
17 was a very aggressive engineering and construction  
18 schedule. And as Les had mentioned in his presentation  
19 this afternoon, we completed construction of the Phase 1  
20 moly selenium removal process in March of 2008.

21 Significant resources were put on to this  
22 project. It was named the number one project within the  
23 Key Lake operation and, as I've mentioned, it was a very  
24 aggressive schedule to meet this deadline.

25 We are currently in the commissioning

1 process for the moly selenium circuit and I am happy to  
2 note that we are meeting target results or target removal  
3 efficiencies for molybdenum and we are experiencing some  
4 technical challenges as we tie in this new process with  
5 the existing bulk neutralisation effluent treatment  
6 process.

7 So we are moving forward. We are seeing  
8 some removal efficiency of selenium and as we get through  
9 our technical difficulties and further commissioning, we  
10 anticipate enhanced removal of molybdenum even better than  
11 where we're at today and that we will meet the design  
12 criteria for selenium removal.

13 Thank you.

14 **MEMBER GRAHAM:** Just on that, I would like  
15 CNSC staff to comment because in your document you say --  
16 and, first of all, to clarify one thing, is David Creek  
17 and Wolfe Lake the same area, because the maps only show  
18 Wolfe Lake and they don't show David Creek and I presume  
19 that's the same area.

20 But in your document -- in CNSC's document  
21 you say that there has been no reduction -- there's been  
22 no reduction in selenium and molybdenum loadings at David  
23 Creek -- David Creek drainage. Is that just because all  
24 of the -- in Phase I and the equipment is just being  
25 commissioned now. Is that the reason?

1                   But up until the writing of this document  
2 there had been no reduction. But maybe it should be  
3 clarified because I read it as there was none and then  
4 listened today that there is reduction.

5                   Could somebody clarify the fact that what  
6 is happening in David Creek or in Wolfe Lake, whichever --  
7 whichever water body you refer to?

8                   **MR. COURTNEY:** Peter Courtney for the  
9 record.

10                  First of all, Wolfe Lake is part of the  
11 David system.

12                  And in the CMD -- we're talking about moly  
13 and selenium levels during the review period, which was  
14 November 1<sup>st</sup>, 2004 to March 31<sup>st</sup>, 2008, so no reduction  
15 during that period.

16                  And you're correct that there isn't  
17 currently any removal technology for moly and selenium so  
18 there hasn't been any removal because there's no mechanism  
19 in place. So the Phase I mitigation is that removal  
20 technology and until it starts to remove moly and selenium  
21 then there won't be reduction. We don't expect to see  
22 reduction.

23                  **MEMBER GRAHAM:** When do you foresee the  
24 commissioning and start seeing some results, and will  
25 there be -- those levels are -- will you be putting in

1 licence condition to reach certain levels or what is your  
2 plan as far -- or what are you looking for in this next  
3 licensing period as far as loading of David Creek or the  
4 Wolfe Lake Watershed?

5 **MR. RABSKI:** Henry Rabski for the record.

6 I'd like Malcolm McKee to follow up on the  
7 first response from staff regarding this project and the  
8 importance of it.

9 **MR. MCKEE:** Malcolm McKee for the record.

10 The issue with respect to the reduction of  
11 -- Cameco -- CNSC staff would be the first to admit the  
12 extensive effort that Cameco has put into all levels of  
13 addressing this issue over the last few years.

14 However, before we can actually state that  
15 an implementation has been successful we have to actually  
16 see performance data and that's also with respect to any  
17 discussions of future applications for additional  
18 activities. Those would have to be based on a  
19 demonstration of performance of the proposed Phase I  
20 activities.

21 As of the date of the writing of the CMD  
22 the additions had not been commissioned as yet and staff  
23 would be required to see a stable performance of this  
24 system through a reasonable assessment time which may have  
25 to involve looking at seasonal implications on some of

1           these systems too.

2                   **THE CHAIRMAN:** I must tell you, I'm totally  
3           confused. I heard somebody who says there was a  
4           reduction. I heard somebody saying there is no technology  
5           that actually can produce reduction. And you're telling  
6           me you're waiting for data.

7                   Somebody please clarify what is your  
8           expectation here?

9                   **MR. MCKEE:** Malcolm McKee for the record.  
10           Right now the system has not been up and  
11           running on a continuous basis, therefore, we have not seen  
12           a continuous performance.

13                   Peter Courtney can address that ---

14                   **THE CHAIRMAN:** But is that one in -- the  
15           first one in the world? I mean is that a one off? I mean  
16           -- because I thought that somebody said there is no  
17           technology for removal of molybdenum.

18                   **MR. NEUBURGER:** Dave Neuburger for the --  
19           oh.

20                   **MR. COURTNEY:** Peter Courtney for the  
21           record.

22                   The Phase I was commissioned in March. So  
23           as Brett Moldovan just commented, they are in the process  
24           of commissioning that Phase I and he's indicating that  
25           they're seeing the moly reduction but they are still in

1 the test phase. It's a mill circuit that they're testing  
2 and they're having difficulties with it. It has to go  
3 offline when it's not working properly and my  
4 understanding is, is that it's offline a lot. So it isn't  
5 actually part of the functioning operation at this point.

6 We expect that when it is -- and Brett  
7 Moldovan was talking about some of the early test  
8 indications -- that when it is up and running we expect to  
9 see the reduction of moly and selenium.

10 **THE CHAIRMAN:** Well, is it reasonable to  
11 expect for Day 2 to get at least an update of this  
12 particular experiment?

13 Thank you.

14 **MR. NEUBURGER:** Dave Neuburger for the  
15 record.

16 Absolutely it is and we have been working -  
17 - I think perhaps the confusion was also because we're  
18 very eager to share the hard work we've been doing on this  
19 and we're working very hard to have -- we had been working  
20 very hard to get an update for Day 1 actually on  
21 performance here but it's been, as Brett noted, a  
22 challenging commissioning and hence what we have is very  
23 much emerging information that you heard and absolutely  
24 agree with what staff said.

25 It's not to the point where those -- that

1 short-term performance of the circuit can translate into  
2 saying, "Yes, we've definitively seen reduced moly and  
3 selenium in the downstream and receiving environment" but  
4 we are able to say with confidence that we're seeing some  
5 pretty good indications, particularly on the moly side,  
6 and that is also where, I think, the technology is more  
7 accepted as being, you know, in another stage of solid  
8 liquid separation. Other Mills like AREVA's McLean Lake  
9 Mill have used multiple stages of solid liquid separation  
10 and have run at lower molybdenum levels in their discharge  
11 than we have and our indications are we'll be meeting --  
12 certainly meeting those levels.

13 **MEMBER GRAHAM:** Thank you.

14 As I say, I realize the efforts. You've  
15 spent \$18 million or thereabouts and all the efforts, but  
16 there has not been, other than at the laboratory level,  
17 any reduction yet, and that was the -- I think we were  
18 looking if the transcripts were read you would think in  
19 days -- in future days if you read the transcripts I think  
20 you'd think that yes, there was reduction going on right  
21 now and everything was -- you're still very much in the  
22 preliminary stage and hopefully in Day 2 this will happen.  
23 But at the present time, you're just working towards that  
24 objective but haven't reached it.

25 I've got a couple of other questions and

1 not to belabour the issues but one is with regard to fire  
2 protection. Unlike Rabbit Lake you didn't burn down the  
3 firehouse, but the question I have is you received a "C"  
4 in both program and implementation and in reading the  
5 document -- and this is to CNSC staff first -- you're  
6 following fire code 1995, I read somewhere, and I'm  
7 wondering why you wouldn't be moving to code -- the  
8 national building code 2005.

9 Can you confirm today are you going to move  
10 to 2005 or is it going to be the 1995 national building  
11 code?

12 **MR. RABSKI:** Henry Rabski for the record.

13 All three -- for all three facilities, the  
14 condition will reflect the new standard that is accepted,  
15 the 2005 versions for the national fire code and the  
16 building code.

17 **MEMBER GRAHAM:** Thank you.

18 To Cameco, my only question on fire -- both  
19 under program -- fire protection, both under program and  
20 implementation; in Day 2 will you be able to have a more  
21 specific update on scheduling, on programs and what you're  
22 doing to rectify what really is the only one that has got  
23 "C's in both implementation program, how you're going to  
24 clarify some of this before we look at granting you a  
25 licence in Day 2?

1                   **MR. HEIGH:** For the record, Jered Heigh.  
2                   Absolutely. Day 2 is -- we're planning by  
3 then we will have the fire protection program for each one  
4 of the operations developed and moving along with the  
5 action plans and further crossing off more of those  
6 deficiencies that were noted.

7                   Just to your first question as well, the  
8 recent third party expert that we've had doing assessments  
9 on us, they are doing this up to the more -- more up-to-  
10 date fire code, not the 1995 version but the 2005.

11                   **MEMBER GRAHAM:** Thank you.

12                   The other question I have is with regard to  
13 decommissioning and this is to CNSC staff.

14                   At the present time you have, I believe, a  
15 \$45 million plus financial guarantee. You're looking at a  
16 new decommissioning plan which will take that up to \$98  
17 million. Will that be completed by Day Two and we will be  
18 able to then go forward with a recommendation as to a new  
19 financial guarantee?

20                   **MR. RABSKI:** Henry Rabski for the record.

21                   Our intention is that staff will have the  
22 review completed by Day Two and that be presented in front  
23 of the Commission for acceptance so that we can move  
24 forward in revising the actual financial guarantee  
25 numbers.

1                   **THE CHAIRMAN:** Thank you.

2                   Mr. Tolgyesi.

3                   **MEMBER TOLGYESI:** Thank you, Mr. Chairman.

4                   Thank you. I have one question regarding -  
5                   - how do you call -- Deilmann sand pit slopes. You had a  
6                   sloughing there, I don't know on which part exactly it was  
7                   but what you were saying that according to the studies  
8                   which were undertaken in 2005 by Golder and yourself, the  
9                   report could not provide a clear recommendation for  
10                  remediation.

11                  You were saying also because implementation  
12                  for slope remediation techniques could precipitate a  
13                  failure and after you were saying that you still work with  
14                  Golder; you have some studies with Mittal and geotechnical  
15                  studies I suppose, it's in that area.

16                  My question is, the slope, what we see  
17                  there it's steeper than 32, I think it's about maybe 38 or  
18                  something like that or maybe even 40 degrees.

19                  So what happens if it's there further  
20                  sloughing, one, other one, if it's all sand pit, did you  
21                  evaluate what's the risk if it's sloughing all around  
22                  because you have some stockpiles around and it's reducing  
23                  quite a bit your storage capacity in tailings?

24                  **MR. NEUBURGER:** Dave Neuburger for the  
25                  record.

1                   I'll ask Pat Landine, our Manager of Geo-  
2                   environmental Engineering to provide you a response to  
3                   this.

4                   Certainly both in terms of what are the  
5                   slope angles and would we expect more sloughing from them  
6                   and the broader issue of what it makes up the walls of the  
7                   pit, it's not entirely sand; I should point that out but  
8                   Pat can describe that a little bit for you.

9                   **MR. LANDINE:** Pat Landine for the record.

10                  Going back to the -- you're mentioning the  
11                  Golder report from 2006, I believe that was, where it said  
12                  there was no clear recommendation for a slope  
13                  stabilization measure. That report was essentially a  
14                  first cut at looking at slope stabilization measures,  
15                  maybe more like a scoping study than a pre-feasibility  
16                  study.

17                  And it identified a number of potential  
18                  measures but in the absence of defining a failure  
19                  mechanism we were reluctant to proceed on any one of those  
20                  measures for -- again, for concerns over safety in  
21                  implementing it, as well as in terms of not wanting to  
22                  precipitate a failure while we're doing it.

23                  With respect to the slope angle, it's hard  
24                  to judge a slope angle from looking at a picture. The  
25                  measured slope angle right now is between -- essentially

1 32 degrees.

2 Hari just whispered to me that it's  
3 actually 32 to 34.

4 As far as the perimeter of sand, it's the  
5 west end of the facility really and what -- it was easier  
6 to see it when the facility -- or prior to flooding we had  
7 a very distinct small west cell we called it and then the  
8 very large east cell.

9 So the west part of the TMF and the pit  
10 really, was excavated into a wash sand and so that's the  
11 material that's failing. Essentially, the rest of the pit  
12 has sandstone pit walls so not subject to the same kind of  
13 failure mechanism.

14 As far as continued sloughing, we have  
15 operational experience over the past three years with --  
16 where water level control has been effective and has  
17 prevented any further sloughing failures.

18 **MEMBER TOLGYESI:** I'm sorry; do you have --  
19 staff, do you have any comments on that? It will hold or  
20 it will go?

21 **MR. NGUYEN:** For the record my name is Son  
22 Nguyen.

23 It is correct; the slope angle is around --  
24 from 32 to 34 degrees. It's only the west side of the  
25 DTMF which has that overburdened sand. On the other side

1       you have other -- either sandstone or till which is much  
2       more -- which has much higher shield strength to resist  
3       this kind of sloughing mechanism.

4               We have heard some remediation options from  
5       Golder in the past; some of them include, like  
6       stabilization by reducing the slope angle from the top or  
7       providing a berm at the bottom of the pit, inside the  
8       tailings area.

9               Those measures are feasible to stabilize  
10       the slope. There is some potential of triggering another  
11       slough failure if the method of working is not properly  
12       engineered; you can have heavy equipment working on top of  
13       the slope which might trigger another slope failure, this  
14       is why one of the concern for safety during construction.

15               Although lately when we went to the site  
16       and we had a meeting a couple of weeks ago with Cameco, it  
17       seems that the engineering has progressed to a much more  
18       comfortable level where you -- some action can be -- some  
19       remediation action using that idea of stabilizing both  
20       from cutting the slope back from the top and putting a  
21       berm at the toe could be feasible and observing the safety  
22       of construction equipment and workers as well.

23               **MEMBER TOLGYESI:** How it will affect the  
24       capacity of the pit as a storage?

25               **MR. NGUYEN:** Son Nguyen for the record.

1                   One of the option recommended by -- studied  
2 by Golder for Cameco is to recycle one of the -- some of  
3 the -- almost all of the slough sand inside the pit and  
4 put them in what they call geo-tubes which they intend to  
5 use as a stabilization berm in the bottom of the pit.

6                   **THE CHAIRMAN:** Thank you.

7                   Dr. Barnes.

8                   **MEMBER BARNES:** Well, I think the -- I  
9 would agree with Mr. Graham, that there does seem to be  
10 some gap between the licensee, Cameco, and Canadian  
11 Nuclear Safety Commission staff.

12                   I also want to point out again that there  
13 is a significant gap, I think, in the words Mr. Grandey  
14 stated at the beginning of the day on operational  
15 excellence and treating here a report which has five "C's  
16 in it and some of them, I think, are quite significant and  
17 serious and not easy to resolve. Some of the others of  
18 the previous licence, I think, can be resolved within --  
19 well within the duration.

20                   So I'll pick up on just a couple. I mean,  
21 one could go on for quite some time here and I'll try and  
22 avoid that. But if I can just pick up on the sloughing  
23 issue which of course we discussed earlier.

24                   And in a sense one can argue why would you  
25 allow the level of the tailings pond to, in a sense, come



1                    contributed to slope instability after  
2                    submergence."

3                    I won't bother reading them but there are  
4 five bullets there and, you know, those to me, those are  
5 always basic components of potential failure in any  
6 situation like this. This isn't kind of rocket science or  
7 sophisticated geotechnical engineering to me.

8                    And then the following paragraph says:

9                    "All of the above mechanisms acting  
10                    separately or in combination lead to  
11                    slope instability."

12                    But agreeing structure collapse of loose  
13 sand is the most credible reason for the extent of the  
14 instability. It should be noted that the trigger in most  
15 of the failure mechanisms described above is a rising  
16 water table.

17                    So again, I just come back to the point.  
18 You can't have this situation of loose sand and bring  
19 water up to it without expecting some collapse of sand  
20 into the lake, basically.

21                    And on the long-term basis I would say that  
22 you should expect more of it and so the issue is how do  
23 you stop it and placing a berm at the bottom.

24                    So I'm not quite sure, how -- if there was  
25 to be a berm at the bottom where is that in relation to

1           what we see? How far below water level here would that  
2           berm be and how extensive would that berm be?

3                        Could I get an answer to that, perhaps from  
4           the licensee? It does seem to be the most favoured option  
5           at the present time, excepting that you're still  
6           considering a number of options.

7                        **MR. NEUBURGER:** Dave Neuburger for the  
8           record.

9                        We're still considering options and we're  
10          still developing options as well. So I think I can ask  
11          Ken Gullen initially to speak to some of the work being  
12          done to assess options.

13                       I do want to note that one of the, you  
14          know, as you note, the increasing water level has  
15          contributed to instability. We've held the water level  
16          for -- since 2005 which was one of the primary  
17          recommendations from the DTMF, the Deilmann Tailings  
18          Management Facility Advisory Committee. Since that time  
19          we haven't had a sloughing event.

20                       We also see as one very potential  
21          mitigating measure is actually reducing the water level,  
22          and we have that capability now because holding the water  
23          level then meant that we needed to work to expand the  
24          capacity of our reverse osmosis plant and, effectively, if  
25          we -- to hold the water level we needed to treat more

1 water from the dewatering wells that surround this area.

2 We have expanded that reverse osmosis  
3 plant. It's been operational at the full expanded  
4 capacity since the first quarter of this year and is now  
5 treating significantly higher volumes of water than it was  
6 earlier.

7 So that also then creates the possibility  
8 for us and where we plan to be moving is to bringing the  
9 water level down a little bit over the next number of  
10 years and increasing stability compared to what we have  
11 right now.

12 That provides more time, breathing room,  
13 assurance, comfort, in terms of slope stability to assess  
14 -- first, assess the options for remediation and then very  
15 much put in place any remediation option which we know  
16 would not be a short term project to put -- to implement a  
17 solution to stabilize the slopes.

18 I also -- before I ask Ken to give you a  
19 little more flavour at -- what the options we're looking  
20 at, also note that as Les mentioned in his presentation,  
21 we're doing tailings option studies at Key Lake as well,  
22 as we are at Rabbit Lake, to look at future long-term  
23 tailings capacity. And this will weigh-off options around  
24 stabilizing slopes and using the Deilmann TMF for the long  
25 term or perhaps it makes more sense for us at some point

1 to move to another facility.

2 So those things we need to consider as well  
3 and we are taking a very holistic view to that by looking  
4 at tailings options from -- basically I'm just repeating  
5 myself here -- tailings options from both using the  
6 existing facility for the longer term and/or using new  
7 facilities eventually as well.

8 So I'll ask Ken Gullen to answer your  
9 particular question more on what options we're looking at  
10 for remediation.

11 **MR. GULLEN:** Ken Gullen for the record.

12 There is mention to a 2006 report by Golder  
13 that looked at basically scoping or just preliminary  
14 options for how we might stabilize the slopes. And it was  
15 also mentioned that at that time we were concerned for the  
16 safety of any workers that may be working around the  
17 slopes; that it could initiate a slough, and we're also  
18 concerned with initiating a fluff and loss of more  
19 tailings area.

20 What we felt was we need to really  
21 understand the mechanisms of failure so that any option we  
22 use to firm up the stability of the slopes would not  
23 initiate a slough itself.

24 So we had contracted with experts in the  
25 field, H. K. Mittal, and GEO-SLOPE to understand that. In

1 late 2007 we had some preliminary discussions on that  
2 where we looked at some of the results.

3 We then at that point realized okay, now we  
4 have a better understanding. So what we needed to do is  
5 to start bringing on a remediation contractor that could  
6 come up with options so we'd have the whole picture of how  
7 we might remediate the slopes, stabilize the slopes, so  
8 that organization could work closely with H. K. Mittal and  
9 ourselves.

10 So, fourth quarter of 2007 we -- the search  
11 for firms that had expertise -- extensive expertise in  
12 stabilizing slopes and particularly firms that have worked  
13 with outwash sands in the past.

14 We identified two organizations that did  
15 meet those requirements. We had discussions with both  
16 those organizations, looking at their capabilities in this  
17 area and we selected -- it was mentioned it's Golder but  
18 it's actually an association of Golder, it's called Golder  
19 Associates Innovative Applications and GAIA is the short  
20 form, does have extensive experience world-wide and we  
21 were very impressed with their capabilities.

22 We feel very comfortable working with them  
23 and as I mentioned, we're working closely together to  
24 understand what the best option is.

25 So Golder is currently working on sort of a

1       scoping pre-feasibility study on the various options that  
2       we could implement. We then can use -- find out all the  
3       modelling that has been done on -- to understand the  
4       mechanisms to then look at how to ensure that those --  
5       whatever option we select will show -- will be stable and  
6       will be effective and will be safe.

7                   **MEMBER BARNES:** In your reply, I think to  
8       Dr. Tolgyesi, especially a comment was that you've been  
9       controlling this adequately by the level of the water in  
10      the pit.

11                   I note that staff, on page 8 of their  
12      report indicates -- but however, CNSC staff have  
13      determined that the water level control provides  
14      "marginal" stability only and is not a suitable long-term  
15      solution to the sloughing issue.

16                   Cameco has identified, preferred a long-  
17      terms stabilization options, maybe in the way you've just  
18      been speaking but have indicated they see no urgency in  
19      implementing them based on the review of the data and  
20      literature and independent modelling.

21                   Staff believes that independent  
22      stabilization et cetera, et cetera, and therefore are  
23      recommending a licence condition.

24                   So I haven't heard any change in what I'll  
25      call the urgency issue from Cameco today. You're looking

1 at this in a sort of a long-term continuing study process,  
2 potentially bringing down water levels a little bit and so  
3 on.

4 How do you feel about the licence condition  
5 that staff is putting in on this issue?

6 **MR. NEUBURGER:** Dave Neuburger for the  
7 record.

8 We do feel that -- well, I should start off  
9 saying, we see this, the Deilmann Tailings Management  
10 Facility as a very significant risk and one that we are  
11 very concerned with as an organization and hence, I  
12 believe we do feel a lot of urgency around it. Perhaps  
13 the challenge we have is we need to understand and ensure  
14 that we understand the options well. And I don't want to  
15 leave the impression that urgency in addressing  
16 stabilizing the Deilmann TMF can mean that I can tell you  
17 today or I could tell you by Day Two what we are going to  
18 be doing to stabilise our slopes because it is complex.  
19 Any slope stabilisation will be a significant project that  
20 will take some time. I know that and we need to  
21 understand in -- in whatever means we move forward. We  
22 need to understand that we have a plan and a means that  
23 will ensure the safety of our personnel and those of  
24 anyone working on stabilising the slopes. We want to  
25 ensure that the solution doesn't create anymore sloughing

1 situations and we need to understand how long it will take  
2 and what it will mean in terms of capacity.

3 So at some point, it needs to be -- if the  
4 solution takes so long or reduces capacity sufficiently,  
5 or to such a great extent, it may make more sense for us  
6 to be moving down the road of having less capacity that  
7 we'll eventually use from the Deilmann TFM and moving to  
8 another facility.

9 So that becomes a very complex decision,  
10 which I cannot -- I couldn't stand in front of you today  
11 and tell you that we are able to meet that very quickly.  
12 I think that perhaps is the reason for the difference in  
13 the view of urgency.

14 I would say and what we try to reflect in  
15 all the work we've been doing here is that through  
16 engaging experts in looking at stabilisation methods  
17 through embarking upon tailings options study that looks  
18 at potentially new facilities through the work we've done  
19 to understand the mechanism over the last 18 months or so,  
20 those are all ways that we demonstrate; we've been adding  
21 resources to this problem and we've been demonstrating  
22 urgency to deal with the issue of the stabilising the  
23 Deilmann TFM and gaining some confidence in its ongoing  
24 performance.

25 **MEMBER BARNES:** Okay, but I still think

1 this is a critical issue in the licensing issue that we  
2 are addressing here. From the information you give us  
3 dealing with the capacity of the DTMF, which you cover on  
4 page 19 to 21 of your report, and correct me if I'm wrong  
5 in these figures, but you have available capacity of 2.1  
6 million cubic metres. In the last licence period, you  
7 inputted basically a million cubic metres. So you would  
8 have two cycles of five years left, except I guess within  
9 that -- I'm not sure in that one million whether you  
10 included the 19 percent that was sloughed or whether  
11 that's in addition to that.

12 So again, quite easily within more  
13 sloughing, you might only have one licence period of five  
14 years. So how you are addressing this disposal of  
15 tailings I think is quite, quite an important process  
16 because you're saying, you know, in an operation of  
17 excellence and you have this. Surely there needs to be  
18 some long-term planning and if you are going to give up on  
19 this facility, then I think the Commission would like to  
20 know, well, where is the next option? All these things  
21 take a fair amount of time planning and approval in place.

22 So I would hope on Day Two that we would  
23 have perhaps a further revisit of this not from what we  
24 know but I think you only shared with us some of the  
25 material from the last year's report. It would be good to

1 have again a cross-section of the DTMF.

2 Specifically, you say at the present time  
3 that the tailings levels are at 460 metres above sea  
4 level, but you suggest going to 476 and then 490 metres  
5 above sea level. That's correct? With further  
6 emplacement of tailings in the pit and so, on the one  
7 hand, I'm hearing, "well, we'll just lower the water  
8 level" and then here, looking ahead in some of the other  
9 descriptions, you are adding more and more tailings to it.  
10 So I'm not quite -- it's not very clear what the plan and  
11 the options are, to be entirely frank here.

12 **MR. NEUBURGER:** No. Dave Neuburger for the  
13 record.

14 I can appreciate it isn't, and that's one  
15 of the complex interactions I'm trying to -- I was trying  
16 to express, not very clearly.

17 If we are to move forward with higher  
18 elevations of tailings deposition, for example, 490 in the  
19 Deilmann TMF, I think we recognize that that is  
20 intricately linked with stabilisation of the west cell.  
21 But that has to be weighed off. Those types of options  
22 have to be weighed off ultimately with will it make more  
23 sense to just deposit tailings to 466 elevation, for  
24 example, and eventually shift to a new tailings facility  
25 in the ten-year window or so that we believe we have

1 capacity up to 466.

2 So that's why it's difficult to demonstrate  
3 the urgency and saying we know we are going to have a  
4 stabilisation means agreed to at a certain date, because  
5 it needs to be considering does it make more sense to  
6 shift to a new facility? What do we understand for the  
7 capacity we would have if we stabilized the west cell and  
8 move to a 490 on the Deilmann TMF versus what would we  
9 face with a new facility?

10 But you are absolutely correct, those two  
11 are linked. We wouldn't be expecting to move forward with  
12 application to eventually deposit tailings to 490 metres  
13 above sea level without clearly putting in place  
14 stabilisation of the slopes of the facility.

15 **MEMBER BARNES:** I think what I was trying  
16 to get at here in this discussion is that in the way that  
17 you've outlined it here, I don't think this is a fair  
18 frank analysis of the issues.

19 And so on the one hand, we read this and  
20 then we read the staff, which I would say are somewhat in  
21 conflict of how you control the situation, and it's not,  
22 to me, a mature, fair, objective analysis of a company  
23 that's coming and saying, "I want my licence renewed and  
24 this is one key problem we have and I'm asking for a five-  
25 year licence and over the period of either this licence or

1 the next one, we have some really serious issues of  
2 tailings disposal and here are the possible options. And  
3 this is what we are going to do to come to some detailed  
4 analysis of those options."

5 So if I go into a second topic, which I'll  
6 now stop, Mr. Chair, but it's the issue of the loadings.  
7 And this has been discussed by a couple of Commissions, so  
8 I can keep it fairly tight.

9 But on the other hand, again, it comes back  
10 to operational excellence and staff told us that in the  
11 last licence there was a licence condition that said in a  
12 sense you will not increase molybdenum, selenium loadings  
13 during the period of the licence. Is that correct, staff?

14 **MR. COURTNEY:** Peter Courtney for the  
15 record.

16 The licence condition said that an action  
17 plan had to be put in place and implemented, which would  
18 have resulted in reductions but since they didn't get it  
19 into Phase 1, it is just being commissioned now. It  
20 wasn't in place and there weren't any reductions.

21 **MEMBER BARNES:** Right. So I mean this is  
22 my point coming back to operational excellence and C's.  
23 What do we see? We see on Cameco's text and,  
24 particularly, Table 3, Page 10 of 29, which is the Wolfe  
25 Lake discharge, the mass loadings is -- if you look at the

1 moly and selenium, it's basically a 50 percent increase.  
2 So moly in 2004 was 1,250 -- around the mark of 1,250  
3 kilograms, and it's gone up to 1,700 -- yes, 1,750  
4 kilograms and the selenium goes from 33.2 to 51.2.

5 So is the company being asked to put some  
6 controls on these two and the licensee, just in its own  
7 words, immediately below that says, "molybdenum and  
8 selenium continue to be the prime elements of concern in  
9 terms of potential for causing chronic effects in the  
10 receiving environment."

11 So in the spirit of ALARA and what we heard  
12 from staff specialists of the efforts that should be made  
13 to limit this for long-term receiving environment of  
14 particularly these two troublesome elements, we see during  
15 the last term, a five-year term, that through the  
16 processes that you are asking a licence for, the dumping  
17 out here has gone up 50 percent. All right?

18 And so through that period, you've worked  
19 out a process but again it's taken until the five years  
20 before you now get to putting stage one and when the Chair  
21 asked, you know, what are the results, well, we don't know  
22 the results at this time so now we're going into a  
23 licence, et cetera. So I guess it's partly covered by  
24 another licence condition.

25 So it comes back to the urgency. We've

1 heard that you're spending \$18 million, so I mean clearly  
2 you're taking this seriously but I think the company is  
3 proceeding in its business of processing uranium and yet  
4 the environment is suffering significantly through this  
5 time.

6 Again, I think there's maybe this gap of  
7 either perception from the overarching words of the  
8 company or what it's trying to achieve versus what the  
9 reality is over the last five years and looking ahead  
10 forward.

11 So I think these are fairly serious issues  
12 and I don't know if you have any further comment on that.

13 **MR. NEUBURGER:** Dave Neuburger for the  
14 record.

15 I would comment that the licence condition  
16 on moly and selenium reduction was a licence condition  
17 that was added at the licence amendment hearing that we  
18 had in January 2006; associated with the midterm review  
19 for Key Lake. Sorry, January 2007, I'm sorry.

20 And the action plan that was spoken to was  
21 developed between a -- agreed to between Cameco and CNSC  
22 staff in December of 2006, I believe, just prior to that  
23 hearing.

24 That all -- so from our perspective we've  
25 moved actually very quickly on this issue. There was --

1 the concerns over selenium and molybdenum and our  
2 understanding of the impacts on the environment were  
3 raised by CNSC staff and during our work at moving forward  
4 with an environmental assessment to increase our  
5 production limit at Key Lake and McArthur.

6 And subsequent to that being raised there  
7 was a -- CNSC staff carried out an assessment of current  
8 operations, given their level of concern over the  
9 downstream environment in the David Creek drainage system.

10 We have been -- since we've developed that  
11 action plan and since we've been in discussion with CNSC  
12 staff over that concern and started to better understand  
13 it through our environmental effects monitoring, we have  
14 been acting very quickly on putting in place change to our  
15 effluent treatment circuit in order that we can reduce  
16 moly and selenium.

17 That's, in my mind, actually is exactly  
18 what is expected out of operational excellence.

19 **MEMBER BARNES:** But I think one question  
20 is, are you responding because the staff advised you that  
21 there was a problem with selenium and moly and you should  
22 do something about it or is the company recognizing that  
23 if you're in that business there's going to be some  
24 contamination from those two particular troublesome  
25 components and that you should be doing something about it

1 at a significant level?

2 It's been intriguing in the media this  
3 week, in the area of New Brunswick where people have been  
4 trying to -- from an exploration and also the Commission  
5 staff going there that discuss uranium exploration, then  
6 you'd know there's been a very strong public concern, to  
7 put it mildly, with comments about, well, would you want  
8 to live near a uranium mine; all right.

9 And so if you're in the business -- this is  
10 a world leading company coming back to the kind of level  
11 of excellence here. I think the Commission would expect a  
12 company like that in this business to try to reduce the  
13 environmental impact of this so that if there is a need  
14 for uranium in the decades ahead then one would work to  
15 try to reduce the reality of environmental impact and  
16 through that -- through doing that the level of public  
17 fear and concern on this.

18 And so from what I heard you say that  
19 you're essentially responding to some of the requirements  
20 that CNSC staff have put on here; whereas we've tried and  
21 not only with yourself but with the power reactors to say  
22 the responsibility of meeting these requirements, licence  
23 requirements is really on the position of the licensee,  
24 not on the staff, and that it's for you as a company to  
25 recognize that the urgency and the need to solve these

1 problems as opposed to doing it through licence  
2 conditions.

3 **MR. GRANDEY:** Gerald Grandey for the  
4 record.

5 You know, part of the issue that we face,  
6 Dr. Barnes, here, is that there's no doubt dealing with  
7 historic facilities, if you go back five, 10 years,  
8 environmental leadership was not even the lingo of any of  
9 the operators, clearly in the mining industry and  
10 certainly not in this one.

11 And we recognized and the staff helped us  
12 understand and I'm not sure this is a very good example  
13 with selenium and molybdenum but aside from some of the  
14 arguments that we had about the science and the  
15 significance, ultimately we concluded with the staff that  
16 we ought to put ourselves on a path of dealing with moly  
17 selenium. We began looking at, you know, the host of  
18 elements that are out there across all of the operations.

19 So to conclude that something that dates  
20 back a long time, because this is not concentrations in  
21 water; this is build up in the sediments over 25 years and  
22 looking forward as is it a problem now or will it be a  
23 problem upon decommissioning and what should we do about  
24 it.

25 To conclude that that historic problem that

1 we have stepped up to and started spending money on with  
2 commissioning facilities is a reflection, because we had  
3 to work with the staff of an absence of environmental  
4 leadership, I don't agree with you. I think it's -- as  
5 Dave Neuburger said, many of these things that we're  
6 dealing with are historic.

7 The company has adopted a policy of trying  
8 to move toward environmental leadership. We never  
9 promised that we're going to be perfect but you can see  
10 with the number of people that are here and the amount of  
11 effort and money and time being devoted to these issues,  
12 that the company is absolutely committed to striving for  
13 and achieving environmental leadership.

14 **MEMBER BARNES:** So you haven't committed to  
15 being perfect but I think you have committed to ALARA in  
16 general; would that be correct?

17 **MR. GRANDEY:** Absolutely. Absolutely and I  
18 think that's reflected and has been reflected in things  
19 this company has done for 20 years.

20 **THE CHAIRMAN:** I think what you hear here  
21 is the frustration of some of my colleagues who have been  
22 around here for a lot longer than I have and have some  
23 corporate memories on some of the things.

24 Not having the same benefit of experience  
25 here I take you -- investment and obtaining to become a

1 leader is something that we will try to hold you to that  
2 particular commitment moving forward.

3 We will try to make sure that we monitor  
4 this progress on a lot more tighter kind of -- a more  
5 rigorous way and hopefully we can see this -- I'm still  
6 looking for some "A's in the scorecards and we will give  
7 you hints as to -- in Day Two, the kind of issue that we  
8 believe you should be dealing with.

9 Now, I'm conscious about the time; we've  
10 got two more big files going on so I don't want to  
11 shutdown the question but if you have anymore kind of  
12 pressing questions now is the time.

13 I didn't scare you from -- okay.

14 (LAUGHTER/RIRES)

15 **THE CHAIRMAN:** Well, thank you very much.  
16 You're going to do your closing?

17 **MR. LEBLANC:** I will do that.

18 So this brings to a close this public  
19 hearing. It is to be continued with Day Two on September  
20 17<sup>th</sup>, 2008, again at the Delta Bessborough in Saskatoon.

21 The public is invited to participate,  
22 either by oral presentation or written submissions on  
23 Hearing Day Two.

24 Persons who wish to intervene on that day  
25 must file submissions by August 18, 2008. Supplementary

1           CMDs from Cameco and CNSC staff should be filed as soon as  
2 possible, by no later than September 10<sup>th</sup>, 2008.

3                           The hearing is now adjourned to September  
4 17<sup>th</sup>, 2008.

5                           We will reconvene in 12 minutes, at 16:20.

6                           **THE CHAIRMAN:** I think we can manage 16:30.

7                           **MR. LEBLANC:** Sixteen thirty (16:30).

8                           That's 22 minutes. Okay, you're the boss.

9                           --- Upon recessing at 4:09 p.m./

10                           L'audience est suspendue à 16h09

11