

1           **HEARING DAY 1**

2           **Cameco Corporation: Application for a licence to**  
3           **operate the McArthur River Operation**

4                           THE CHAIRPERSON: Thank you very  
5           much.

6                           Then we will now move to Agenda  
7           Item No. 6, which is Hearing Day 1 for Cameco  
8           Corporation's application for a licence to operate  
9           the McArthur River Operation.

10                          July 10th was the deadline set for  
11           filing by the applicant and the CNSC staff and  
12           both met the deadline.

13                          August 1st was the deadline for  
14           filing supplementary information for the Applicant  
15           and for the Commission staff.

16                          The Applicant met the deadline and  
17           staff did not provide supplementary information on  
18           this.

19                          I would like to start by the oral  
20           presentation by Cameco Corporation as outlined in  
21           CMD Documents 01-H21.1 and 01-H21.1A.

22                          THE CHAIRPERSON: Monsieur Michel.

23

24           **01-H21.1/01-H21.1A**

25           **Oral Presentation by Cameco Corporation**

1                   MR. MICHEL: Madam Chair, this  
2 will be presented by John Jarrell first of all,  
3 supported by Bill Wakabayashi, who is General  
4 Manager of McArthur River and Key Lake for Cameco.

5                   With your permission, I will ask  
6 John Jarrell to present the matter.

7                   MR. JARRELL: Thank you.

8                   For the transcript record of the  
9 hearing, my name is John Jarrell and I am  
10 Vice-President, Environment Safety for Cameco  
11 Corporation.

12                   What I would like to do this  
13 afternoon is give you a very brief overview of our  
14 written submission.

15                   While Rabbit Lake may be the  
16 oldest uranium mine, McArthur River is the  
17 youngest. Cameco and its predecessor have been  
18 active on the site for over 20 years. The main  
19 discovery was made in 1988 and we undertook a  
20 seven-year underground exploration and approval  
21 process prior to the start of construction.

22                   A two-year construction period  
23 followed, then approval to operate in late 1999 by  
24 way of the issuance of the current licence. The  
25 operation is owned by both Cameco and COGEMA.

1                   This is a picture of the site. I  
2 think what I am trying to show you here is that it  
3 is a relatively compact minesite.

4                   You can see shaft No. 2 in the  
5 foreground in the bottom left-hand corner of the  
6 picture outfitted with exhaust fans.

7                   You can see the main shaft or the  
8 Pollock shaft. It is fairly obvious from the  
9 headframe in the background on the right-hand side  
10 of the picture.

11                  You also note a fairly extensive  
12 use of paving, which is somewhat unique for a  
13 minesite.

14                  As might be expected,  
15 commissioning and start-up were not without their  
16 challenges. This slide tries to outline the main  
17 issue that we had to deal with during that period  
18 of time, specifically a change in the ore  
19 collection method.

20                  A transportable mining unit, which  
21 was the device that we designed to collect the ore  
22 from the bottom of the raise, was replaced with a  
23 simpler ore collection chute.

24                  The issue was really essentially  
25 one of rock characteristics below the ore which

1 was not seen during the commissioning work that  
2 was done in waste rock.

3 The change that we made was  
4 primarily made for safety and for radiation  
5 concerns. I would say as well, though, it was  
6 also made for efficiency, in other words the time  
7 that a raise is spent open.

8 The development alternative that  
9 we ended up with was introduced into the process  
10 in sort of a phased method. It involved a fair  
11 number of trials and reports.

12 Other changes that are listed in  
13 this slide include the fixed screening unit which  
14 was installed -- and I will show you a picture a  
15 little later -- was installed to reuse the ore  
16 storage capacity that was built into the circuit  
17 in the first place.

18 We also have a change in the ore  
19 tramming route in order to keep as much of the ore  
20 tramming route in fresh air as possible.

21 We sought approval for and  
22 received approval to develop a conventional ore  
23 haul procedure for material that was less than  
24 2 per cent uranium.

25 We developed an underground water

1        recycle program and a change was also made in the  
2        backfill aggregate requirements in order to use  
3        more of the potentially acid generating waste rock  
4        which has developed.

5                    Three other changes which are  
6        under way or proposed at present are listed on  
7        this slide, specifically the development of an  
8        underground ore storage area for process upsets,  
9        modifications to the ore slurry transportation  
10       operation and modifications to the waste rock  
11       scanning procedure.

12                   This is an isometric view of the  
13       mine which shows the Pollock shaft or the main  
14       shaft, as well as the No. 2 and No. 3 shafts,  
15       No. 2 being the exhaust shaft and No. 3 being the  
16       supplementary air intake shaft.

17                   It also shows that the mine has  
18       been developed at two primary levels, at the  
19       530 metre level, which is the mining level, and a  
20       640 metre level or production level.

21                   It also shows isometrically the  
22       first four zones of mineralization on this  
23       property.

24                   If you look very carefully, there  
25       are a couple of thin lines there which are the

1 slurry hoisting lines to the surface.

2 This schematic represents the type  
3 of general configuration that we find for the main  
4 ore deposit and the relative position of the two  
5 level developments.

6 A freeze curtain has been  
7 established to prevent high pressure flowing water  
8 from entering into the mine.

9 Calcium chloride brine is chilled  
10 to minus 35 degrees celsius in the 700 tonne per  
11 day ammonia freeze plant on surface. For trivia  
12 buffs, the freeze plant is large enough to service  
13 27 NHL arenas I am told.

14 The brine is piped to the  
15 530 metre level into freeze holes drilled  
16 100 metres into the ore body at about a two metre  
17 interval spacing.

18 In this plan view, the freeze  
19 holes are represented by blue crosses. The freeze  
20 holes extend down approximately 100 metres. This  
21 freeze curtain separates the water-bearing  
22 sandstone from the ore. Raises are depicted by  
23 the green circles.

24 The raise bore mining method  
25 involves drilling a 300 millimetre diameter hole

1 down from the 530 metre level to the 640 metre  
2 level. The hole is probed to define the ore  
3 interval and then the reamer head is attached to  
4 the drill rods and pulled up through the ore.

5 The ore cuttings are collected in  
6 the ore collection chute below the raise and  
7 hauled to either a SAG mill grizzly or this fixed  
8 screening unit, which I mentioned earlier, by  
9 remote scooptram.

10 The reamer rotates as it bores its  
11 way up through the rock into the ore. This mining  
12 method ensures that workers do not enter the ore  
13 area.

14 A remote breakout tool is used to  
15 remove the reamer head after completing mining of  
16 a specific raise. The use of remotely operated  
17 equipment reduces worker exposure.

18 Here is a picture of the raise  
19 bore machine at its upper level. In general, the  
20 accuracy of the pilot hole system has been very  
21 acceptable and the reaming rates have been as  
22 expected. Efforts continue to improve upon set up  
23 and move times and the time necessary to drill  
24 these pilot holes.

25 The function of the original

1 transporting mining unit was to capture the mined  
2 ore, screen it and pumped the undersized to coarse  
3 ore storage bins.

4 Early on in the mine commissioning  
5 a failure of this unit occurred due to unexpected  
6 ground conditions. The raise became blocked with  
7 rocks and clay and then became saturated with  
8 groundwater.

9 It was recognized that a  
10 potentially dangerous situation existed and the  
11 drift was evacuated and roped off. Approximately  
12 three hours later there was a liquefaction of this  
13 material in the raise, resulting in approximately  
14 30 tonnes of rock being released into the  
15 extraction chamber.

16 This is a picture of the  
17 transportable mining unit replacement. It is  
18 clearly a simpler mechanism, easier to monitor  
19 from a distance.

20 The scrubber system, which is  
21 shown on the right, draws long-lived radioactive  
22 dust, radon gas and radon progeny from around the  
23 ore collection chute, thereby providing a measure  
24 of secondary containment.

25 Radon rich air, downcast air from

1 the raise, travels in the return air drift and is  
2 exhausted up shaft No. 2. Workers are not allowed  
3 down wind of the ore collection chute without  
4 respiratory protection.

5 The scooptram is situated under  
6 the ore collection chute in the extraction chamber  
7 and operated remotely to allow the operator to  
8 stand in fresh air and well back from the ore.

9 Once in place, the filling  
10 operation is monitored by closed circuit  
11 television.

12 Mining stops when the bucket is  
13 approximately 70 per cent full. The scoop is  
14 backed out of the extraction chamber in remote  
15 control mode and the ore is dumped into the mill  
16 for processing.

17 This picture shows the ore  
18 scanning station to determine uranium content.  
19 All buckets are scanned and mineralized material  
20 is either sent through the underground grinding  
21 circuit or hauled to surface, depending on grade.

22 This picture shows the  
23 semi-autogenous or SAG mill. The ore is ground  
24 into a water-based mud or slurry and I would say  
25 that controlling the particle-size distribution is

1           probably the most important control aspect of this  
2           operation.

3                           This picture shows the fixed  
4           screening unit which was built from the original  
5           transportable mining unit or TMU. It permits use  
6           of the coarse ore storage bin, as I mentioned  
7           earlier.

8                           Ground and classified ore is  
9           thickened to approximately 50 to 55 per cent  
10          solids in one of two thirteen metre diameter  
11          underground thickeners. Note the cover installed  
12          to control radon and radon progeny emissions from  
13          this vessel.

14                          Finally, positive displacement  
15          pumps raise the slurry to surface.

16                          In the surface slurry load-out  
17          building ore is blended to produce a consistent  
18          grade. It is thickened again in a surface  
19          thickener and loaded into specially designed ore  
20          slurry containers which are shown here.

21                          So, in summary, the mining  
22          sequence involves the following: First, pilot  
23          hole drilling, followed by raise boring, followed  
24          by isolating the bottom of the raise with a high  
25          strength concrete plug and then backfilling the

1 raise from the upper level.

2 Several operational changes and  
3 procedural changes were required in the milling or  
4 ore processing end of the underground process.  
5 The root cause of the necessary changes was  
6 variable characteristics of the ore.

7 The challenge before us is to  
8 produce a consistent product to avoid plugging and  
9 regrinding requirements. McArthur River has been  
10 successful in ramping up its production rate over  
11 the last 18 months since commissioning and  
12 start-up commenced.

13 Although McArthur River, in  
14 conjunction with Key Lake, was awarded the 1999  
15 John T. Ryan Award, there was room for  
16 improvement, particularly with regard to mine  
17 development work.

18 Contractor performance in 2000 was  
19 not judged satisfactory by either Cameco or the  
20 contractor.

21 Although development work has  
22 slowed down, focus will continue to be placed on  
23 assuring that good safety performance is achieved  
24 by all people working at the site.

25 The other priority issue has been

1           assured safe performance of the shaft conveyance  
2           system.

3                               While conventional safety  
4           performance may be judged less than desired in  
5           2000, radiation safety performance is another  
6           story. We achieved good performance despite the  
7           newness of the activity that we were undertaking.  
8           Radiation safety is, I believe, a cornerstone of  
9           this operation and we believe that the technical  
10          design of the process is fundamentally sound.

11                              The radiation safety program has,  
12          we believe, been responsive to changing operating  
13          conditions. The ALARA focus has been on basically  
14          three things: start-up incident investigations,  
15          establishing baseline conditions and focusing on  
16          reducing potential impacts from upset conditions.

17                              Other priorities are housekeeping  
18          and efficiency of the radiation monitoring  
19          program.

20                              This slide shows the year 2000  
21          radiation exposure broken down by work group and  
22          exposure sources.

23                              As expected, the underground  
24          workforce has the highest exposure levels relative  
25          to surface workers.

1                   The effluent treatment system has  
2                   operated well. No significant concerns have been  
3                   identified in air quality monitoring. There were  
4                   two minor SERM reportable spills during the  
5                   licensing period.

6                   The site has an active four hour  
7                   recycle program and plans to install a new on-site  
8                   contaminated garbage incinerator to further reduce  
9                   waste inventories.

10                  In the areas of community  
11                  consultation, two meetings were held with the  
12                  Environmental Quality Committee during the current  
13                  licensing period.

14                  One was related to radiation  
15                  protection for workers to give them an overview of  
16                  what information was given to workers.

17                  The other was associated with the  
18                  relicensing of the operation for SERM relicensing.

19                  We were also involved with what is  
20                  called a Mudjatic Co-Management Board which  
21                  basically deals with road access issues on the  
22                  road between Key Lake and McArthur, and also the  
23                  Northern Labour Market Committee. Activities are  
24                  coordinated out of an office in La Ronge in  
25                  northern Saskatchewan.

1                   The focus in decommissioning is  
2 obviously on revegetation, specifically  
3 revegetation of lands affected by the original  
4 construction activity. Priority is also given to  
5 controlling future waste rock liability and the  
6 decommissioning of the original site access road.

7                   We hope to ramp up production to  
8 license production levels over the next licensing  
9 period and investigate the feasibility of  
10 increased production rates.

11                  Beginning in the year 2003 we will  
12 need to supplement production from Zone 1 and by  
13 the year 2005 we will need to commence mining from  
14 Zone 4, subject, of course, to favourable outcome  
15 of the current licensing process.

16                  We will need to test alternative  
17 Zone 4 mining methods. We will need to complete  
18 Shaft No. 3. We will need to enhance water  
19 pumping capabilities and continue to develop the  
20 new management systems such as were described  
21 earlier under the Rabbit Lake hearing.

22                  In summary, we believe that  
23 McArthur River has demonstrated a high level of  
24 commitment to safety, particularly radiation  
25 safety, has given ongoing priority to radiation

1 safety, not just in design and construction, and  
2 has met its challenges in a responsible fashion.

3 McArthur River has also  
4 demonstrated ongoing commitment to reclamation and  
5 dialogue with our northern neighbours.

6 We therefore respectfully request  
7 that the Commission give favourable consideration  
8 to renewal of the McArthur River licence.

9 We also request consideration for  
10 extending the license period, given the fact that  
11 the mine plan over the next several years is  
12 generally set subject to articulation and  
13 acceptance of detailed mine development plans.

14 Thank you for your attention.

15 THE CHAIRPERSON: Thank you very  
16 much.

17 With the permission of the  
18 Commission Members, I would like to turn to the  
19 presentation by the CNSC staff before we open for  
20 questions.

21 Therefore, I would turn to the  
22 oral presentation by CNSC staff as outlined in  
23 CMD Document 01-H21 and turn the floor over to  
24 Mr. Pereira.

25

1           **01-H21**

2           **Oral Presentation by CNSC Staff**

3                           MR. PEREIRA: For the record, my  
4 name is Ken Pereira. I am the Director General of  
5 the Directorate of Fuel Cycle and Materials  
6 Regulation.

7                           The McArthur River mining facility  
8 has been subject to regulatory control by the AECB  
9 and more recently by the CNSC since 1990.

10                          An operating licence for the  
11 facility was granted in October 1999 and the  
12 commercial production rate was achieved late in  
13 2000.

14                          Over the term of the current  
15 licence, CNSC staff has conducted a number of  
16 inspections and has undertaken several assessments  
17 of the licensee's managed programs.

18                          They have reviewed and approved a  
19 number of initial changes in the mining process.  
20 An overall evaluation of the licensee's  
21 performance is presented in CMD 01-H21.

22                          I will now pass the presentation  
23 over to Mr. Barclay Howden, who is the Director of  
24 the Uranium Facilities Division.

25                          MR. HOWDEN: Madam Chair, Members

1 of the Commission, my name is Barclay Howden.

2 For the McArthur River operation I  
3 would like to brief you on the environmental  
4 assessment history of this site and how it links  
5 to the Key Lake operation.

6 As well, I would like to note that  
7 the corporate QA issue spoken about earlier  
8 applies to this hearing and the following hearing  
9 on Key Lake.

10 I will not speak further on this  
11 latter issue, as the details are contained in the  
12 respective licensing CMDs.

13 With respect to environmental  
14 assessment, in April 1991 the Governments of  
15 Canada and Saskatchewan announced a joint  
16 federal-provincial environmental review of five  
17 proposed uranium mine developments in northern  
18 Saskatchewan.

19 The joint federal-provincial panel  
20 on uranium mining developments was appointed in  
21 August 1991 to conduct a public review of the  
22 proposed developments. Included in the review was  
23 a proposal to mine the McArthur River ore body and  
24 to mill this ore at Key Lake with Cameco  
25 Corporation as the operator.

1                   Prior to the preparation of its  
2                   environmental impact statement, Cameco indicated a  
3                   need to assess the nature of the McArthur River  
4                   ore body at depth and to carry out test mining  
5                   activities.

6                   The test mine proposal was  
7                   reviewed by the joint panel. Following public  
8                   hearings held in December 1992, the panel  
9                   submitted a report with recommendations in January  
10                  1993. The project was licensed by the Atomic  
11                  Energy Control Board under a mining facility  
12                  excavation license and was allowed to proceed.

13                  The Key Lake operation had  
14                  previously undergone a provincial environmental  
15                  assessment review and was already licensed by the  
16                  AECB to mill Key Lake ore.

17                  Cameco submitted its environmental  
18                  impact statement for McArthur River in December  
19                  1995 and an addendum to this information in June  
20                  1996. This proposal included underground mining  
21                  at McArthur River, the processing and disposal of  
22                  mill tailings at the Key Lake site and the  
23                  building of a road from the McArthur River mine to  
24                  the existing Key Lake mill.

25                  The joint panel held public

1           hearings in September and October of 1996 and  
2           submitted a report with recommendations in  
3           February 1997. The joint panel recommended that  
4           the project be approved subject to certain  
5           conditions.

6                           The Government of Canada responded  
7           to the joint panel's report in May 1997. The  
8           federal response took into account the fact that  
9           recommendations on technical, environmental and  
10          safety issues would be addressed during the normal  
11          phased licensing process of the Atomic Energy  
12          Control Board.

13                          AECB staff took the joint panel's  
14          recommendation and the federal response into  
15          consideration when looking at the applications for  
16          Cameco for approval to mine the ore at McArthur  
17          River and to mill that ore at Key Lake.

18                          Based on this, AECB staff  
19          formulated licensing recommendations that were  
20          presented to the Atomic Energy Control Board. The  
21          Board subsequently authorized mining the ore body  
22          at McArthur River and milling this ore at Key  
23          Lake.

24                          I will now turn over the  
25          presentation to Mr. Rick McCabe, who will provide

1           you with an overview of CNSC staff's assessment of  
2           this facility.

3                           MR. McCABE: Thank you.

4                           I am Rick McCabe.

5                           Cameco's McArthur River operation  
6           is currently licensed by the CNSC.

7                           Cameco Corporation has applied for  
8           renewal of its uranium mine operating licence for  
9           a five-year term.

10                          The Commission is requested to  
11           consider issuing a uranium mine operating licence  
12           for a 28-month term.

13                          The Applicant is seeking CNSC's  
14           approval to continue its uranium mine operation at  
15           McArthur River for a five-year period.

16                          The activities requested include  
17           the following:

18                          Mining Zone 1 and Zone 2 ore  
19           bodies;  
20                          test mining of Zone 4 ore bodies;  
21                          process uranium ore underground;  
22                          package and transport nuclear  
23           substances;  
24                          operate the Mine Water Treatment  
25           Plant;

1                   store waste rock;  
2                   handle and store materials and  
3       dispose of hazardous waste;  
4                   possess and use nuclear substances  
5       and devices.

6                   This presentation includes the  
7       results of CNSC staff's assessment of the major  
8       programs in place at the McArthur River operation.

9                   CNSC staff finds that with respect  
10       to the radiation protection that Cameco has met  
11       the application requirements.

12                   The year 2000 was the first full  
13       year of ore mining and processing operations. The  
14       average dose for a nuclear energy worker was  
15       1.2 millisieverts and a maximum individual dose  
16       was 9.3 millisieverts. The results indicate that  
17       radiation doses are being adequately controlled at  
18       the facility and are below the limits of  
19       50 millisieverts per year and 100 millisieverts  
20       effective dose in five years.

21                   The proposed action levels for  
22       effective dose of 1 millisievert per week and  
23       5 millisieverts per quarter are considered  
24       acceptable for this licensing period. Action  
25       levels will be reviewed on an ongoing basis to

1 ensure they remain appropriate.

2 The radiation protection program  
3 in operation at the McArthur River operation has  
4 operated effectively during the licensing period  
5 and was able to accommodate special projects and  
6 evaluations required due to the changes in the  
7 mining and processing operations during the  
8 commissioning phase.

9 The radiation protection program  
10 is acceptable to CNSC staff.

11 CNSC staff finds the McArthur  
12 River operation's environmental program meets the  
13 application requirements in the Act and the Mining  
14 and Milling Regulations.

15 Cameco's policy on environmental  
16 protection is comprehensive. It includes  
17 commitments to regulatory compliance, pollution  
18 prevention, control of environmental impacts to  
19 levels as low as reasonable achievable, as well as  
20 monitoring and assessment to achieve continual  
21 improvements in environmental performance. The  
22 policy outlines applicability, accountabilities  
23 and programs to achieve these objectives.

24 The Environmental Code of Practice  
25 submitted with the current license application

1 includes both administrative and action levels.

2 The Environmental Monitoring  
3 Program and results obtained through it are  
4 subject to ongoing review by CNSC staff as part of  
5 the regulatory compliance activities.

6 The Environmental Monitoring  
7 Program also incorporates an environmental effects  
8 monitoring component for aquatic biota. This  
9 component of the program requires further  
10 evaluation when specific levels are reached in  
11 water, fish and macroinvertebrates. The  
12 evaluation determines if any effects can be  
13 observed as a result of the level having been  
14 reached and what follow-up is required, if any.

15 Air quality monitoring results for  
16 2000 and to the end of February 2001 did not  
17 indicate any significant issues.

18 Results of surface water quality  
19 monitoring up to and including February 2001 were  
20 compared to Saskatchewan Surface Water Quality  
21 Objectives and other applicable criteria intended  
22 to protect aquatic life. No significant issues  
23 were identified.

24 Additional environmental and  
25 biological effects monitoring conducted in 2000

1 did not indicate any significant issues and  
2 contributed to strengthening the Environmental  
3 Effects Monitoring Program. The next series of  
4 biological effects monitoring is scheduled for  
5 2003.

6 There were no exceedances of the  
7 effluent discharge limits during the licensing  
8 period.

9 Based on the program documents and  
10 environmental monitoring records reviewed, CNSC  
11 staff concludes that the Environmental Protection  
12 Program provides adequate provision for the  
13 protection of the environment.

14 Quality assurance program, the  
15 same comments as has been made with regard to the  
16 Rabbit Lake operation apply to this and I will  
17 just move through that.

18 Given these circumstances and the  
19 commitments that have been made, the Quality  
20 Assurance program is conditionally acceptable.

21 I would further make comments on  
22 Slide 8 with regard to the roles of Saskatchewan  
23 Labour, Human Resources Development Canada. That  
24 portion is the same and referred to in the Rabbit  
25 Lake presentation.

1 I will move on to our efforts to  
2 co-ordinate reviews with Saskatchewan Labour.

3 Saskatchewan Labour did review the  
4 CNSC staff assessment for a licence renewal. Sask  
5 Labour's position on the conventional safety  
6 program is as follows, and I quote:

7 "McArthur River has  
8 experienced a number of  
9 disturbing incidents,  
10 particularly in their shafts,  
11 but in other areas as well.  
12 Our inspectors have  
13 investigated these incidents  
14 and issued a number of  
15 Notices of Contraventions.  
16 We have also conducted  
17 several training sessions  
18 with their site Occupational  
19 Health Committee. In the  
20 opinion of our inspectors,  
21 safety has improved at  
22 McArthur River in recent  
23 months although we continue  
24 to monitor events at this  
25 mine closely."

1                   CNSC staff finds, with respect to  
2                   the conventional health and safety program, that  
3                   Cameco has met the application requirements  
4                   specified in the Regulations.

5                   The program, as described in the  
6                   documentation, is acceptable to CNSC staff.

7                   Cameco Corporation has provided  
8                   various opportunities for the public to be  
9                   involved and informed of the McArthur River  
10                  Operation.

11                  Cameco is part of the Athabasca  
12                  Working Group. The Athabasca Working Group  
13                  consists of three uranium mining operators, COGEMA  
14                  Resources, Cigar Lake and Cameco, for the three  
15                  projects, McArthur, McClean and Cigar Lake in the  
16                  Athabasca region, and the seven Athabasca  
17                  communities.

18                  Cameco involves the South Central  
19                  Environmental Quality Committee, which consists of  
20                  appointed representatives from 18 northern  
21                  communities in the south central region of  
22                  northern Saskatchewan. They typically meet three  
23                  or four times a year and are responsible for  
24                  bringing to the management of McArthur River  
25                  issues and concerns from the communities and for

1 reporting back to the communities following  
2 committee meetings.

3 Cameco is also a co-sponsor of  
4 "Opportunity North", a newsletter published five  
5 times annually, and reports on mining site  
6 activities, northern business and EQC activities.

7 CNSC staff has participated in  
8 several of the site information sessions with the  
9 South Central Environmental Quality Committee.  
10 Based on the public consultation program described  
11 in the application and the operation's ongoing  
12 commitment as stated in the application, CNSC  
13 staff finds this program to be acceptable.

14 A series of inspections were  
15 conducted by CNSC staff to evaluate the licensee's  
16 compliance with the radiation protection program.  
17 CNSC staff reviewed the management of  
18 radioisotopes, radiation technician training and  
19 performance, radiation work permits, the phased  
20 implementation of the underground ventilation  
21 systems and the ore slurry transportation system.

22 These inspections confirmed that  
23 an effective radiation protection program was in  
24 place and that the operation was in compliance  
25 with the approved programs.

1                   The emergency preparedness, health  
2                   and safety, training, corporate quality management  
3                   and security programs will be further evaluated  
4                   during the licensing period.

5                   A financial guarantee for  
6                   decommissioning, in the form of an irrevocable  
7                   letter of credit for the sum of \$8.6 million, was  
8                   put in place December 21, 1998.

9                   There is a need to revise the plan  
10                  in accordance with new CNSC requirements.  
11                  Consequently, two conditions have been included in  
12                  the licence. One condition requires Cameco to  
13                  maintain its current financial guarantee, while a  
14                  second condition requires Cameco to review this  
15                  guarantee.

16                  The Joint Federal-Provincial Panel  
17                  on Uranium Mining Developments in Northern  
18                  Saskatchewan reviewed the proposal to process  
19                  uranium ore from the McArthur River Operation at  
20                  the Key Lake facility under the federal  
21                  Environmental Assessment and Review Process  
22                  Guidelines Order.

23                  The panel issued its report in  
24                  February 1997, in which the potential  
25                  environmental effects were determined not to be

1 significant, taking into account the  
2 implementation of appropriate mitigation measures.  
3 The joint panel recommended approval of the  
4 project with several conditions. The federal  
5 government responded to the panel's report in  
6 1997, agreeing that the project should proceed.

7 The AECB's position on the  
8 Government of Canada's response to the joint  
9 panel's recommendations was included in BMD 97-125  
10 and updated in BMD 99-72.

11 The activities at the McArthur  
12 River facility that are to be authorized by the  
13 proposed issuance of the operating licence are the  
14 same as those authorized by the current licence,  
15 for which the conclusions of the environmental  
16 assessment remain valid. The appropriate  
17 mitigation measures have been implemented.

18 Accordingly, pursuant to Section 3  
19 of the Exclusion List Regulations and Section 2 of  
20 Schedule 1, Part I of the Exclusion List  
21 Regulations, an environmental assessment of the  
22 project pursuant to the Canadian Environmental  
23 Assessment Act is not required.

24 Based upon this assessment, CNSC  
25 staff recommends that the Commission:

1                   a) accept the CNSC staff  
2                   assessment that the applicant is qualified to  
3                   carry on the activity that the licence will  
4                   authorize the licensee to carry on; and will, in  
5                   carrying on that activity, make adequate provision  
6                   for the protection of the environment, the health  
7                   and safety of persons and the maintenance of  
8                   national security and measures required to  
9                   implement international obligations to which  
10                  Canada has agreed;

11                  b) accept staff's assessment that  
12                  pursuant to Section 3 of the Exclusion List  
13                  Regulations and Section 2 of Schedule 1, Part I,  
14                  of the Exclusion List Regulations, an  
15                  environmental assessment pursuant to CEAA is not  
16                  required; and

17                  c) consider issuing the proposed  
18                  Uranium Mine Operating Licence for a period of 28  
19                  months.

20                                   Thank you.

21                                   MR. PEREIRA: That completes the  
22                                   staff presentation, Madam Chair.

23                                   THE CHAIRPERSON: Thank you.

24                                   The floor is now open for  
25                                   questions.

1 Dr. Giroux.

2 MEMBER GIROUX: Thank you.

3 Let me start with a question about  
4 units.

5 As I read the written document  
6 that we had, we have some indications of  
7 quantities which are expressed in kilograms, and  
8 between parentheses there is an expression in  
9 pounds.

10 As I read this, I thought they  
11 were giving us the equivalent in pounds of these  
12 kilograms, not being clear about this. Then it  
13 struck me that there is not 2.6 pounds to a  
14 kilogram, but 2.2. Then I started looking again  
15 and decided you were talking about two different  
16 substances. One is uranium and the other one is  
17  $U_3O_8$ .

18 The next question was: Why did  
19 they change units? Was it to check the awareness  
20 of Commissioners, or is there some tradition in  
21 the system?

22 Both staff and Cameco do this  
23 change of units. Maybe one leads the other.

24 This is a light question, but is  
25 there some tradition that for uranium you talk in

1 kilograms and for  $U_3O_8$  you talk in pounds?

2 MR. MICHEL: If I may answer the  
3 question, in North America one is used to pounds  
4 of  $U_3O_8$ . Elsewhere in the world the commodity is  
5 really traded in tons of uranium.

6 It would appear that the licence  
7 to us is given in millions of kilograms of  
8 uranium, which is consistent with international  
9 practice.

10 MEMBER GIROUX: It is interesting  
11 to see that in essentially the same quantity two  
12 units are used. I understand and thank you. As I  
13 said, it was a light question.

14 A more serious question to Cameco  
15 is about the numerous accidents that are reported  
16 in your report involving your staff and your  
17 contractors.

18 The question is, I think -- and  
19 you say you are addressing this -- what were the  
20 principal causes of the accidents? Was it  
21 procedures or human negligence?

22 How would you qualify them?

23 MR. JARRELL: First of all, it was  
24 related to the contract development work. It  
25 wasn't so much the regular mining.

1                   Interestingly, it seemed to be  
2                   experienced miners rather than the new miners. We  
3                   thought and we spent a lot of time with the  
4                   management of the contractor to try to examine  
5                   this.

6                   The way we dealt with it  
7                   essentially was to look at breaking up teams to  
8                   avoid the sort of camaraderie that you get with  
9                   certain groups. We looked at the use of tour walk  
10                  meetings, to examine jobs before they do them.

11                  One of the difficulties with  
12                  development work is that you are doing one-off  
13                  things, so there is more of a requirement to sort  
14                  of think before you act.

15                  The effort was really one of  
16                  trying to change the attitude, I think, of miners  
17                  and to use some of the conventional safety tools  
18                  that we had before us. That was the main issue.

19                  We struggled with this over the  
20                  year 2000. We had a number of meetings with the  
21                  management of the contractor to try to implement  
22                  different ways, to weigh different procedural  
23                  methods, different inspection techniques and so  
24                  on.

25                  We had some success towards the

1 end, but clearly in our view the performance in  
2 2000 needed improvement.

3 I would say it is mostly  
4 procedural based. That was the main issue.

5 MEMBER GIROUX: Thank you. A last  
6 question for this first round.

7 Concerning your monitoring  
8 programming in Cameco, you indicate that you are  
9 planning to review your program. The implication,  
10 I understand, is that you might make it a bit  
11 lighter or less intensive.

12 I would like confirmation of that.  
13 What is your reading on this?

14 MR. JARRELL: I would respond as  
15 follows.

16 Because this was a new venture, we  
17 took the tactic that we would use a rather  
18 extensive monitoring program, at least initially,  
19 because it was new, because people were not  
20 familiar with what they were doing, and that we  
21 would perhaps go into this a little deeper than we  
22 would otherwise do on sort of a normal state.

23 We wanted to make sure because it  
24 was new and because the potential for exposure was  
25 higher than under a lower grade mine. So we had a

1           rather extensive program.

2                               What I was referring to was sort  
3           of taking a look at the efficiency of that after  
4           we develop some routines to see where the most  
5           effective use of that effort is.

6                               What we found, sort of  
7           paradoxically, is that during the first years we  
8           actually had to increase the number of radiation  
9           technicians to meet that need. I think what we  
10          will look at in the next licensing period is to  
11          try to put some additional efficiencies in that:  
12          reduce frequency, look at programs from the point  
13          of view of are we getting useful information on  
14          these? Where we can we make proficiencies?

15                              I think it was based on the  
16          recognition that we probably, if anything,  
17          over-reacted initially on the radiation monitoring  
18          and now we should look at what is the resting  
19          state for it.

20                              THE CHAIRPERSON: Mr. Graham.

21                              MEMBER GRAHAM: I have a question  
22          for Cameco.

23                              First of all, is your facility  
24          unionized? Are the contractors unionized?

25                              MR. MICHEL: Our employees are

1 unionized. The mining contractor which was  
2 referred to earlier is not unionized.

3 MEMBER GRAHAM: As a second  
4 question, then: Are any of the union represented  
5 here today with you?

6 MR. MICHEL: No.

7 MEMBER GRAHAM: My question  
8 follows what Dr. Giroux had mentioned. The  
9 disturbing incidents, particularly in the shafts  
10 but in other areas as well, were all those  
11 incidents pertaining to the contractor?

12 MR. MICHEL: I cannot answer this  
13 question. I believe that Bill Wakabayashi can  
14 answer it.

15 MR. WAKABAYASHI: Bill  
16 Wakabayashi.

17 Yes, the shaft incidents in  
18 particular were all related to contractors and  
19 incidents related to them.

20 This year we had a single incident  
21 with one of our own employees who was learning the  
22 job. That is the single disabling injury that we  
23 have received to our employee.

24 MEMBER GRAHAM: As a second  
25 question, Occupational Health or Saskatchewan

1 Department of Labour have been at the site and  
2 have been very concerned. I had asked that  
3 question on the previous application.

4 On this one you have had problems  
5 and there have been citations by Occupational  
6 Health and Sask Labour?

7 MR. WAKABAYASHI: Yes, we have  
8 been contravened by the Ministry of Labour. All  
9 this is associated with the conveyances on the  
10 Pollock shaft. We have since recommissioned the  
11 shaft and the conveyances, having participated  
12 with external experts, assigning resources,  
13 manpower and supervisory resources, to make sure  
14 that those recommendations were incorporated;  
15 revamping our preventive maintenance systems to  
16 make sure that we are paying attention to the  
17 right things in the shaft.

18 Since those actions have been  
19 taken, there have been no incidents in the shaft.

20 MEMBER GRAHAM: A question to CNSC  
21 staff.

22 In that same slide in the  
23 presentation, you say that the program as  
24 described in this documentation is acceptable.

25 Are you saying as it exists now or

1 as it was when the accidents were occurring?

2 MR. PEREIRA: We are talking about  
3 now. But I will ask Mr. McCabe to comment on the  
4 issue at greater length.

5 MR. McCABE: We are referring to  
6 as the document exists now, given the  
7 qualifications that we have put in the text of the  
8 presentation and the CMD, that our role in the  
9 conventional safety area is limited.

10 We receive reports on conventional  
11 issues. The ones that we receive, we review. We  
12 then request of Saskatchewan Labour or Human  
13 Resources Development Canada follow-up action.

14 What we are looking for here is  
15 have they met their requirements to notify us that  
16 they have a system in place to notify us of these  
17 incidents? Yes, they have met that requirement.  
18 It is not an extensive program in that sense.

19 MEMBER GRAHAM: What you are  
20 saying, if I followed correctly, you are aware of  
21 these incidents as they happened. They were  
22 reported to you?

23 MR. McCABE: Yes. They are  
24 required now, under the new Regulations, to do  
25 just that.

1                   MEMBER GRAHAM: Not now. I mean  
2 when they happened. The disturbing incidents that  
3 are referred to in Slide 8, were you aware of them  
4 as they happened?

5                   MR. McCABE: Yes, most of them, I  
6 am sure. I couldn't categorically say the initial  
7 ones; but yes, we were aware of this as a  
8 situation.

9                   MEMBER GRAHAM: Then my question  
10 to staff is: When does this become a significant  
11 development that is reported to the Commission?  
12 What is the judgment of how severe the incident is  
13 before you report it?

14                   MR. McCABE: Well, the frequency  
15 of these incidents was of concern. The nature of  
16 most of the incidences, I understand, was with  
17 regard to alignment of the equipment; one of the  
18 incidents going into the dump.

19                   These are significant incidents,  
20 but somewhat within the line of what happens  
21 within the mining industry.

22                   At that time we didn't deem these  
23 to be reportable to the Commission. It didn't  
24 seem at the time that that was needed.

25                   The other incident with regard to

1 a personal cage that was being used and  
2 experienced some difficulty, we spent some  
3 significant effort co-ordinating the response and  
4 the remedy of this with Human Resources  
5 Development Canada and Saskatchewan Labour.

6 They were not neglected in that  
7 sense, but they were not reported to the  
8 Commission.

9 MEMBER GRAHAM: One other question  
10 I have.

11 On page 2 -- I think it is Slide 4  
12 -- you gave a proposed action level for exposed  
13 dose of 1 millisievert per week, or 5  
14 millisieverts per quarter.

15 Has that ever been exceeded?

16 MR. McCABE: At the McArthur River  
17 Operation, no.

18 MEMBER GRAHAM: It hasn't.

19 MR. McCABE: I don't believe so.  
20 No.

21 MEMBER GRAHAM: Thank you.

22 THE CHAIRPERSON: Dr. Barnes.

23 MEMBER BARNES: I have a few  
24 specific questions again.

25 I am looking at the staff

1 presentation, 4.1.1, Clean Waste-Rock Storage and  
2 the Potentially Acid-Generating Waste-Storage,  
3 4.1.2.

4 Probably the question is to the  
5 Applicant Cameco.

6 I notice currently for the  
7 potential acid generating waste storage there is  
8 74,000 cubic metres been placed on pads.

9 If I go to the normal clean waste  
10 rock, it tells me that there is 83,000 cubic  
11 metres and gives a number of 900,000 which will be  
12 stored during the location of the mine, which is a  
13 20-year period.

14 But it doesn't give an indication  
15 of the expected amount of acid-generating waste  
16 storage material that will in a sense be  
17 accumulated during the lifespan of the mine.

18 It does refer to some material  
19 being placed in the mine, but at the moment it is  
20 only 10 per cent. I know the mine has not been  
21 fully operating, and so on.

22 What do we see through the  
23 lifetime of the mine of the amount of  
24 acid-generating waste storage being on surface?

25 MR. WAKABAYASHI: We have a good

1           idea on how much waste we will be generating in  
2           developing and accessing other mining areas, and  
3           that is really just developing our mining plans  
4           and pursuing those plans.

5                         As part of that, while we are in  
6           the development phase, we do come across  
7           potentially acid-generating materials. We don't  
8           have a good prediction of the amount of material  
9           that we will generate, but it will be much lower  
10          than the normal clean waste that we would generate  
11          in the mining development of the orebody.

12                        MEMBER BARNES: Even though at the  
13          moment it is about the same volume.

14                        MR. WAKABAYASHI: Yes, that is  
15          correct. The clean waste material is used for  
16          other purposes, and it is very difficult to say in  
17          the area that we are proceeding to, the south end  
18          of the strike of the orebody, what the acid  
19          generating potential would be of some of that  
20          material.

21                        MEMBER BARNES: In the zones that  
22          you are mining, is there a significant fluid  
23          pressure at those depths?

24                        MR. WAKABAYASHI: We are only  
25          mining in Zone 2 currently. All the production

1 from McArthur River has come from the Zone 2 area.  
2 The experience with the TMU right at the beginning  
3 of the mining cycle was a good example of the  
4 pressure relief that was associated with that  
5 zone.

6 We do anticipate, as we expand  
7 into panel three of Zone 2, which should occur  
8 sometime next month, that we will experience a  
9 similar event, where there will have to be some  
10 sort of pressure relief of the stresses that are  
11 built up in that particular area.

12 We have taken measures that we  
13 were not prepared to take when we first went into  
14 the mine to mitigate any events that may occur  
15 there.

16 Pressure build-up is created, of  
17 course, by the growth of the freeze wall and the  
18 expansion of the freeze wall, creating internal  
19 pressures in the ore zone.

20 MEMBER BARNES: Under Condition G5  
21 -- that is the decommissioning plan -- I assume  
22 when that plan is submitted it will come back to  
23 this Commission.

24 Is that right?

25 MR. PEREIRA: No. The plan will

1 be reviewed by staff, and we will then look at the  
2 financial guarantee, whether it is adequate to  
3 support the plan.

4 Eventually, when we come to  
5 decommissioning of the mine and a licence is  
6 issued, that will be a hearing before the  
7 Commission.

8 MEMBER BARNES: Could I ask on  
9 what basis the present value of \$8.6 million has  
10 been established.

11 MR. PEREIRA: It is based on the  
12 existing plan that was in place, and a new plan  
13 will be considered as a basis for a revision of  
14 that figure, if necessary.

15 MEMBER BARNES: What are the  
16 criteria that you use in establishing for a  
17 facility of this type, that the commissioning is  
18 only requiring \$8.6 million?

19 I think Cameco may wish to reply.

20 MR. JARRELL: I think I could add  
21 to it, because it is a bit paradoxical. \$8  
22 million doesn't seem like a lot of money.

23 I would say two things.

24 First of all, I think what it  
25 reflects is an ongoing commitment to reduce the

1 waste rock liability by taking waste rock  
2 material, mineralized waste rock, to Key Lake. So  
3 we basically are controlling the growth of  
4 liability with waste rock.

5 Second of all, decommissioning  
6 plans under the current guidelines tend to focus  
7 on surface facilities, not necessarily underground  
8 works. Basically, we don't expect to see large  
9 growths in that number just because we control the  
10 liability of the waste rock, which I think is the  
11 main driver in this.

12 As long as developments stay  
13 underground, as long as there are not additional  
14 surface developments, I don't see there is any  
15 real need to change that number substantially.

16 MEMBER BARNES: Except you just  
17 told me, or at least your colleague did, that you  
18 don't know how much waste rock.

19 MR. JARRELL: That is true. But,  
20 for example, on the acid generating rock we are  
21 also trying to use that material for backfill too.

22 MEMBER BARNES: At the moment only  
23 10 per cent of the amount -- or less than that;  
24 only about 8 per cent of the amount that you  
25 presently have is being used for backfill.

1                   MR. JARRELL: That is correct. I  
2                   guess what I am trying to say is that it probably  
3                   would reflect the ongoing change of waste rock  
4                   inventory. You are quite correct.

5                   MEMBER BARNES: I would like to  
6                   come to the environmental monitoring program, and  
7                   again perhaps Dr. Thompson can help me. I am a  
8                   little persistent in this, but I do worry about  
9                   the fish and micro invertebrates a little.

10                  I am curious that in establishing  
11                  the environmental monitoring program, on the one  
12                  hand I am told from the previous licensing action  
13                  that there are no provincial regulations. So what  
14                  I see in Appendix C are some limits established on  
15                  essentially water quality of a number of arsenic,  
16                  nickel, radium-226, et cetera.

17                  I think in other licences that  
18                  have come before us there has also been built in  
19                  some attempt to have a toxicity test in having  
20                  specific samples of fish in which, if half of them  
21                  die, you have a problem sort of thing. But when  
22                  this came up at the last one, I was told -- at  
23                  least I don't think that situation was built into  
24                  the environmental monitoring plan, and it doesn't  
25                  seem to be built in here.

1                   But I read, if I can be a little  
2                   facetious, we have a level and if we reach that  
3                   level and we go beyond it, then we start to get  
4                   worried about it.

5                   Could you tell me how you design  
6                   this environmental monitoring plan that it really  
7                   does work to protect the water fish and micro  
8                   invertebrates, that I believe it is intended to?

9                   Perhaps Dr. Thompson might start.

10                  DR. THOMPSON: I could start  
11                  possibly with a clarification of what at least I  
12                  intended to say a few minutes ago.

13                  When I mentioned that there were  
14                  no regulatory criteria, it was in terms of water  
15                  quality, for example. Water quality guidelines  
16                  don't tend to be, in general, regulatory limits  
17                  where if a limit is exceeded we would take  
18                  compliance action or enforcement actions.

19                  They tend to be values that are  
20                  representative of concentrations in water, for  
21                  example, of a contaminant that is deemed to be of  
22                  no harm to fish or other organisms.

23                  There are regulatory limits and  
24                  action levels in the effluent monitoring program  
25                  and the effluent control program, and possibly

1           that is where the difference is.

2                           In terms of the environmental  
3 monitoring program, there are two parts to that  
4 program. There is the what I would call more  
5 routine or operational monitoring program that  
6 requires water quality samples to be taken at  
7 certain locations on a frequent basis.

8                           What we have also done is required  
9 Cameco to implement an environmental effects  
10 monitoring program in a risk management framework.

11                           The intent is to monitor water and  
12 sediment quality, as well as fish and benthic  
13 invertebrates on a regular basis and associate  
14 with that monitoring trigger values at which  
15 additional assessments would be required.

16                           We have been working with  
17 chemicals to set those trigger values low enough  
18 that we don't expect to see significant  
19 environmental effects when those triggers are  
20 reached.

21                           When the triggers are reached, it  
22 is an indication that there may be an effect.  
23 Then additional assessment would be done to see  
24 whether it is the case, whether there is indeed an  
25 environmental effect; and if there is, what the

1 extent is.

2 The triggers are intended to be  
3 set low enough to be preventive in nature and not  
4 to wait until we are in an environmental situation  
5 which would not be acceptable.

6 MEMBER BARNES: Looking at  
7 Appendix C -- and this is at pages 8 and 9 of 13  
8 in the staff presentation -- the effluent  
9 discharge limits, it says nothing in there about  
10 sediment analysis.

11 Is that right?

12 DR. THOMPSON: No. Those are  
13 values that apply to the treated effluent before  
14 it is being discharged. There are values that  
15 have to be met in order for the effluent to be  
16 discharged.

17 MEMBER BARNES: So the details of  
18 the environmental monitoring plan are not actually  
19 in this licence.

20 Is that right?

21 DR. THOMPSON: That's right.

22 MEMBER BARNES: Is that normal?

23 DR. THOMPSON: My understanding is  
24 that the environmental monitoring program and the  
25 associated environmental effects monitoring and

1 risk management framework are part of the program  
2 document for environmental protection and not part  
3 of the licence.

4 MEMBER BARNES: Perhaps you could  
5 look at page 9 of 13. That is still in Appendix  
6 C. I may be misreading it here, but seems to defy  
7 logic to me.

8 That is the total radium-226,  
9 where it says:

10 "However, should the  
11 concentration of total  
12 radium-226 in any sample  
13 obtained exceed 0.37 Bq/L,  
14 all subsequent samples of  
15 final effluent collected over  
16 the remainder of the calendar  
17 month shall be analysed for  
18 dissolved radium-226."

19 As I understand it, if you catch  
20 this on the first, you sample for the next 30  
21 days. But if you sample it on the 31st, you don't  
22 sample at all.

23 Is that right?

24 What does that mean "over the  
25 remainder of the calendar month"?

1 DR. THOMPSON: I can explain the  
2 intent of that. I would have to think about the  
3 calendar month.

4 MEMBER BARNES: I assume the  
5 intent was you sample for a month, isn't it, or 30  
6 days? But, as written, you can sample for as many  
7 days as are left in the month.

8 DR. THOMPSON: There is a monthly  
9 average value which essentially for radium, for  
10 example, is .37. That is for dissolved.

11 To measure for dissolved radium is  
12 a little bit more complicated. There are extra  
13 steps to measure for dissolved radium than there  
14 are for total radium. Essentially, the initial  
15 measurements are for total radium, and if total  
16 radium is at that level or exceeded, then we  
17 require that dissolved radium be analyzed.

18 Generally, dissolved radium is  
19 lower, or should be lower, than total radium and  
20 represents the more bio available fraction. If  
21 for total radium we exceed .37, we may not exceed  
22 .37 for dissolved radium, which represents the bio  
23 available fraction.

24 I don't think that answers the  
25 question.

1                   MEMBER BARNES: It is over the  
2 remainder of the calendar month that I am curious  
3 about.

4                   MR. PEREIRA: I will ask Mr.  
5 McCabe to comment on it, since he is more  
6 connected with the drafting of the licence.

7                   MR. McCABE: Just with the wording  
8 that we have here, these values and the wording  
9 and the sampling protocols, as on page 8 of 13 and  
10 9 of 13, including the notes 1 to 7, are virtually  
11 verbatim from the Metal Mining Liquid Effluent  
12 Regulations, Department of Fisheries and Oceans  
13 Regulations. Yes, you are quite correct that that  
14 is a little confusing and probably, in some cases,  
15 if you missed your sample on the 29th, you only  
16 have to do it for two days. A good point.

17                   The derivation of this wording  
18 came from the Metal Mining Liquid Effluent  
19 Regulations. So, we haven't revised it.

20                   MEMBER BARNES: But you might?

21                   MR. McCABE: We might, yes.

22                   THE CHAIRPERSON: I think there  
23 was a certain indication that perhaps we may want  
24 to look at those in line with those.

25                   I think that the Applicant wishes

1 to comment, Dr. Barnes, on this.

2 MR. JARRELL: Just a couple of  
3 points on environmental monitoring.

4 First of all, some of the  
5 confusion may arise because some of the  
6 requirements that are before us are on a SERM  
7 licence and some are on a CNSC licence. For  
8 example, your first concern about monitoring fish  
9 and sediments, that has always been a requirement  
10 under the provincial licence to do that. What is  
11 new here is the requirements to look at the effect  
12 on biota. That is probably the new event here,  
13 but in terms of monitoring sediment and fish, that  
14 has always been a licence condition, but it is  
15 carried in the provincial licence, not the federal  
16 licence.

17 The federal licence, as I  
18 understand essentially, as Mr. McCabe says,  
19 basically affects the Metal Mining Liquid Effluent  
20 Regulations. That likely will change because  
21 there has been modifications proposed to the Metal  
22 Mining Liquid Effluent Regulations which require  
23 enhanced environmental monitoring in addition.  
24 So, I think that you will see changes in this as  
25 time goes on.

1                   As far as the radium results go, I  
2 think probably what that is from my perspective is  
3 an artifact of the requirement for a monthly  
4 average. I think that is what is driving that  
5 thing.

6                   MEMBER BARNES: Perhaps if I could  
7 stitch some of my points together, it is always  
8 difficult, I know, to put everything in a document  
9 like this, but there clearly is some concern on  
10 the environmental effects. Here we are looking at  
11 a high-grade deposit. We have waste rock, which  
12 is substantial at the moment, or could be a lot  
13 more, but you have told me you don't know how much  
14 more it is going to be.

15                   When I look in here for some kind  
16 of Environmental Monitoring Plan, there are very  
17 few details in it for me, reading this document.  
18 So, I don't have the information here to be  
19 convinced that there is an Environmental  
20 Monitoring Plan that is going to provide adequate  
21 protection for water, fish and the  
22 micro-invertebrates or biota. It may be that it  
23 is built in.

24                   I was trying to fish, as it were,  
25 for some additional information here and then

1 found these curious regulations that have some  
2 strange logic to them as well.

3 MR. JARRELL: I guess from my  
4 perspective, there is a fairly substantial  
5 enhanced Environmental Monitoring Program on the  
6 table.

7 The other thing to bear in mind is  
8 there has been an enormous amount of biological  
9 studies done with respect to licensing this in the  
10 first place. So, I can assure you that there is  
11 an extensive program that has been developed with  
12 the CNSC staff. We probably haven't done justice  
13 to it in these presentations.

14 THE CHAIRPERSON: Mr. Pereira?

15 MR. PEREIRA: We can commit to  
16 provide the Commission in the Day 2 update some  
17 information on the Environmental Monitoring  
18 Program.

19 Mr. McCabe will also provide some  
20 additional comments with respect to the issues you  
21 raise.

22 MR. McCABE: I was concerned that  
23 the impression was left that this is not a legal  
24 or reference document. With the hierarchy of  
25 documents that we have referred to in our licence,

1 under Appendix B of this licence, we refer to the  
2 Mining Facility Licensing Manual. That references  
3 policies and programs and procedures. Those  
4 documents, therefore, have legal bearing with  
5 regard to this licence, even though we haven't  
6 provided them to the Commission.

7 I want you to be assured that they  
8 do have that legal path through the licence to  
9 make them legal documents.

10 THE CHAIRPERSON: I wonder if it  
11 would be appropriate, Mr. Pereira, when that  
12 update is done to also reflect some of the  
13 provisions that may be necessary with the new  
14 effluent regulations?

15 MR. PEREIRA: Yes, we can do that.

16 THE CHAIRPERSON: I think that  
17 would be appropriate. Thank you very much.

18 Further questions? Dr. Giroux.

19 MEMBER GIROUX: A question for the  
20 Applicant concerning the duration of the licence.  
21 You argue for a five-year licence, indicating that  
22 you expect to be coming back for a licence  
23 amendment to increase the production at the mine.  
24 Staff recommends a 28-month licence.

25 I was wondering if there is a good

1 probability of timing your request for an  
2 amendment with the 28 months which is proposed by  
3 staff. Increasing production isn't something that  
4 you have to have approval for within a month or  
5 two. We are talking about long-term planning in  
6 your development, and you will see this coming  
7 ahead of time.

8 What is the likelihood that a  
9 28-month licence might be synchronous with your  
10 probable request for an amendment?

11 MR. MICHEL: We will do everything  
12 to ensure that the request for an amendment will  
13 coincide with the end of the period of 28 months.

14 THE CHAIRPERSON: If that is the  
15 decision of the Commission? Just to qualify that  
16 that isn't --

17 MR. MICHEL: This is what I am  
18 assuming, Madam Chair.

19 THE CHAIRPERSON: That is  
20 certainly left to a later part of the hearing. I  
21 think what Dr. Giroux asked is a question with  
22 regards to possibilities of that.

23 Thank you very much for that.

24 Further questions?

25 MR. JACK: Then that brings us to

1 a close of today's proceedings on this particular  
2 application by Cameco Corporation for an  
3 application for a licence to operate the McArthur  
4 River operation.

5 This hearing will continue on the  
6 4th of October here in Ottawa at the CNSC offices.

7 According to the Commission Rules  
8 of Procedure, the Applicant is required to be  
9 present and Commission staff will also be present.  
10 The public is invited to participate, either by  
11 oral presentation or by written submission on that  
12 date. Anybody wishing to do so must file  
13 submissions with the Office of the Secretary here  
14 at the CNSC in Ottawa by September 4th, 2001.

15 Today's hearing is, therefore,  
16 adjourned until the 4th of October.

17 THE CHAIRPERSON: I would suggest  
18 at this point that we take a break. We will take  
19 a 20-minute break until half past the hour. We  
20 will start promptly at half past with item number  
21 7. Thank you very much.

22 --- Upon recessing at 3:10 p.m.

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