

1 **Cameco Corporation:**
2 **Application by Cameco**
3 **Corporation for an Amendment**
4 **to the Beaverlodge**
5 **Waste Facility Operating Licence**

6
7 **07-H4.1/07-H4.1A**

8 **Oral presentation by**
9 **Cameco Corporation**

10
11 **MR. JARRELL:** Good afternoon, Madam Chair,
12 Commission Members, Commission staff, ladies and
13 gentlemen.

14 My name is John Jarrell. I'm Vice-
15 President, Safety, Health and Environment for Cameco
16 Corporation.

17 Joining me today are Carl Paton, on my
18 left, who is Cameco's Project Manager for the Beaverlodge
19 Project; Kevin Himbeault, Senior Environmental Scientist
20 in Safety, Health and Environment; Jean Alonso,
21 Superintendent, Environmental Compliance; and Liam Mooney,
22 Senior Legal Advisor, Safety, Health and Environment
23 Matters.

24 The Beaverlodge site is located in the
25 northwest corner of Saskatchewan, approximately 1,100

1 kilometres north of Saskatchewan. The closest community
2 is Uranium City which is connected to the mine site by a
3 7-kilometre road.

4 There is no permanent road into the Uranium
5 City area. However, dependant upon weather and ice
6 conditions, the area can be accessed by winter roads
7 access, across Lake Athabasca from Stoney Rapids to
8 Uranium City. During the summer a barge can be taken
9 between Stoney Rapids and Uranium City. Access by air
10 remains available all year long.

11 Cameco Corporation currently holds a waste
12 facility operating licence for the decommissioned
13 Beaverlodge mining and milling facility located near
14 Uranium City. This licence has an expiry date of March
15 31st, 2007.

16 We are making this presentation in support
17 of a request to amend the expiry date of the current
18 licence by nine months, to December 31st, 2007.

19 The proposed licence amendment does not
20 incorporate any substantive changes from the requirements
21 of the existing licence nor does the requested amendment
22 propose any changes to the physical site or to the
23 programs currently in place for the maintenance and
24 monitoring of the facility.

25 This presentation will hopefully explain

1 the reasoning for seeking the extension and also provide a
2 concise summary of the activities undertaken to date
3 during the current licensing period.

4 To begin, we thought it appropriate to
5 revisit the rationale behind the existing two-year licence
6 period which was considered at hearings held in September
7 2004 and February 2005. There are two main points.

8 During those past hearings, Cameco
9 requested a two-year period. You may also recall that
10 there was some discussion about the need to consider a
11 longer term. The main rationale for the relatively short-
12 term period related to our plan for a staged release of
13 portions of the property back to the Province of
14 Saskatchewan under the then developing institutional
15 control framework.

16 At the time, we anticipated that by late
17 2006 we would be in a position to seek release from some
18 of the minor satellite properties. The removal of any
19 specific properties from the CNSC licence and from the
20 provincial surface lease was felt to likely be contingent
21 upon completion of the institutional control framework.

22 The second reason related to the status of
23 special environmental investigations; specifically, those
24 initiated by Cameco to access the current on and offsite
25 legacy impacts from the decommissioned Beaverlodge site

1 and to identify any remaining residual risks.

2 At the time the current licence was issued,
3 it was felt that the two-year licensing period aligned
4 well with the planning schedule for these two
5 investigations.

6 In retrospect, we were and arguably may
7 still be a bit too optimistic in trying to balance
8 expediency and to advance the project and thoroughness.
9 Although considerable progress has been made, additional
10 time is required to complete the work.

11 First, I will discuss our perspective on
12 the Province of Saskatchewan's initiative to establish a
13 framework for the return of reclaimed sites to the Crown
14 under some form of institutional control.

15 Considerable progress has been made by the
16 province in establishing an institutional control
17 framework. The *Reclaimed Industrial Sites Act* was passed
18 in the Saskatchewan Legislature in May 2006. Since this
19 time, the province has been developing regulations to
20 support the Act.

21 Currently, it is our understanding that the
22 province's aim is to finalize and enact the regulations by
23 the end of the first quarter of 2007.

24 Cameco is therefore requesting the licence
25 extension to allow for the enactment of the provincial

1 regulations and subsequent completion of the CNSC process
2 to ensure the transfer of properties back to the province
3 under its institutional control framework.

4 In our opinion, there are a number of
5 satellite properties at Beaverlodge that are ready for
6 release from licensed-based provincial and CNSC regulatory
7 instruments and subsequent entry into the province's
8 framework for long-term institutional control.

9 It should also be noted that there are
10 potentially other parties interested in these properties
11 in terms of residual exploration potential.

12 The other main reason for originally
13 requesting the two-year licence was its alignment with the
14 anticipated schedule for completion of special
15 environmental investigations initiated by Cameco in 2005.

16 In consultation with CNSC and Saskatchewan
17 Environment staff, we developed a work plan and study
18 designs for six areas of investigation. Conducting these
19 investigations has proven to be a significant undertaking.

20 We have made very substantial progress
21 completing four of these investigations. The requested
22 licence extension will allow us sufficient time to submit
23 the two outstanding reports and provide sufficient time
24 for regulatory review of all six reports prior to
25 consideration of a longer term licensing period.

1 A brief discussion of the objectives and
2 status of these investigations is provided in the
3 following slides with more detail in the written
4 submission.

5 At this point I will turn the presentation
6 over to Carl Paton.

7 **MR. PATON:** Thank you, John.

8 For the record, my name is Carl Paton. I'm
9 the Project Manager for the Beaverlodge property.

10 I will now provide a brief update on the
11 objectives and status of the special environmental
12 investigations being undertaken at the Beaverlodge
13 property.

14 The first study we'll discuss here is
15 geochemical modelling. The objective of this modelling is
16 to define the behaviour of parameters of concern at
17 upstream sources and determine how these influence water
18 and sediment quality within Fulton Bay of Beaverlodge
19 Lake.

20 This is an update to modelling done in
21 2002-2003 as part of an environmental effects
22 reassessment.

23 New samples have been collected and
24 analysis completed for this study. These results, along
25 with all historic data, have also been used to rerun the

1 model and update predictions.

2 We're currently receiving draft sections of
3 the report and anticipate having the report ready for
4 submission by the end of February of this year.

5 The second study is acute toxicity testing.
6 This program was conducted to determine the potential for
7 adverse toxic effects for water discharging from the
8 property into Beaverlodge Lake at two locations. These
9 are the inflow of Ace Creek into Beaverlodge Lake. During
10 operations, the mill and majority of the mining operations
11 were located within this Ace Creek watershed.

12 The second location is the inflow of Fulton
13 Creek into Fulton Bay, which is a part of Beaverlodge
14 Lake. And again, during operations, Fulton Creek drains
15 the area that was the tailings management area. So it's
16 now the decommissioned tailings management area.

17 What happened with this study is standard
18 Environment Canada rainbow trout LC50 toxicity tests were
19 conducted on four samples collected from each location
20 over the course of a year. No toxicity was observed in
21 any of these tests and a report was submitted in September
22 of 2006.

23 Study number three is existing data review.
24 The objective of this existing data review was to assess
25 conditions in Fulton Bay relative to other parts of

1 Beaverlodge Lake by revealing recently collected
2 biological and chemical data, including that collected by
3 others in the area, not only Cameco.

4 The review of existing data has been
5 completed, except for the inclusion of the most recent
6 fish data which has just been received. The results of
7 those have just recently been received.

8 A report is to be finalized and we should
9 be able to submit that by the end of this February of
10 2007.

11 Although I would like it to be noted,
12 however, that the results of the data review were taken
13 into consideration when designing the current round of
14 environmental investigations in identifying data gaps.

15 Study number four is spatial and temporal
16 metal trends. The objective of this investigation was to
17 define the spatial and temporal extent of metal
18 concentrations in sediments in Fulton Bay of Beaverlodge
19 Lake.

20 The scope of this study was expanded to
21 include pore water in sequential extraction for selected
22 samples for use in the geochemical modelling discussed as
23 study number one.

24 Again, staying with the spatial and
25 temporal metal trends study, sediment cores were collected

1 along several gradients extending out from the outflow of
2 Fulton Creek into Beaverlodge Lake and that's showing in
3 this drawing on the screen now. The decommissioned
4 tailings management area is located within this Fulton
5 Creek watershed.

6 The collection of a series of 2-centimetre
7 depth horizons at selected sample stations assessed the
8 temporal component of the study. Sampling and analysis
9 has been completed and a report was submitted in September
10 of 2006.

11 Study number five is the spawning habitat
12 assessment. This was conducted with the objective of
13 determining the presence, quality and use of large bodied
14 fish spawning habitat in Fulton Bay.

15 The spawning habitat assessments of Fulton
16 Bay and appropriate reference areas were conducted in the
17 fall of 2005 for lake trout and lake white fish and spring
18 2006 for white sucker.

19 Reports on these investigations were
20 submitted in October of 2006.

21 The final study, number six, is the fish
22 health study. The objective of this study was to
23 determine the health of resident fish species within
24 Fulton Bay. This fish health was assessed concurrently
25 with the habitat assessments in Fulton Bay and appropriate

1 reference areas during fall 2005 for lake trout and lake
2 chub and spring 2006 for white sucker.

3 Reports on these investigations were
4 submitted in September of 2006 and these were incorporated
5 with the reports from the spawning assessment mentioned
6 earlier.

7 Despite our best efforts, we've been unable
8 to complete all of the studies within the original
9 schedule that was contemplated back in January 2005. The
10 main factors responsible for delaying the completion of
11 these studies are primarily analytical uncertainty related
12 to selenium data. More details on this topic will be
13 provided in the next several slides.

14 The second main factor was contract lab
15 analytical backlog. We had delays in receiving the
16 results due to this backlog and they were most acute for
17 sediment and fish analysis data.

18 Thirdly, due the complexity and scope of
19 the investigations, more time and resources were required
20 than originally anticipated. And as I also mentioned,
21 there were some increase in scope for some of the studies.

22 Now, to discuss more on the issue of
23 selenium data analytical uncertainty, Cameco uncovered an
24 issue regarding this analytical uncertainty with selenium
25 data. As a result, any components of the environmental

1 investigations utilizing selenium data were delayed while
2 this uncertainty issue was addressed.

3 Given the significance of this issue and
4 its relevance to the environmental investigations being
5 undertaken at Beaverlodge, Cameco provided a relatively
6 detailed discussion on this topic in its written CMD for
7 this hearing and this presentation will provide only a
8 very brief overview of the topic.

9 Questions on the accuracy of selenium data
10 provided by our primary contract laboratory were raised by
11 Cameco when assessing results from a number of different
12 sites and years. Investigations identified several
13 potential sources of uncertainty related to issues with
14 sample preparation and analytical methods or the
15 instrumentation used.

16 The uncertainty was found to be limited to
17 fish flesh analysis. Water and sediment analyses did not
18 have any of these same issues. Test work found that the
19 current method of choice for fish flesh analysis, that is
20 ICPMS or inductively couple plasma mass spectrometry,
21 resulted in selenium results biased high due to an
22 enhancement effect.

23 This enhancement effect was believed to be
24 caused by the large amounts of carbon present in the
25 sample digest. That is digested fish flesh; so obviously

1 lots of carbon. Method modifications by the contract lab
2 appear to have resolved this enhancement issue.

3 In addition to the work discussed above,
4 Cameco also conducted a round robin analysis of fish flesh
5 samples at five separate laboratories. The results of
6 this round robin showed good agreement in wet weight
7 results for four of the laboratories, including our
8 primary contract laboratory.

9 Dry weight results displayed more
10 variability due to, we believe, a number of factors
11 related to differences in sample preparation and moisture
12 determination methods.

13 Overall, the results of the round robin
14 analyses provided Cameco with renewed confidence in the
15 selenium in fish flesh results being provided by our
16 contract laboratory when utilizing the improved sample
17 preparation and analytical methods that I noted earlier.

18 Analysis of a limited number of archived
19 samples from 2000 was also undertaken. Although the new
20 results were generally lower than the mean results from
21 the 2000 analysis, we cannot definitively determine if
22 there is a difference. This is because of variability
23 seen in the original 2000 analysis results and the limited
24 number of archived samples available for re-analysis or
25 follow-up analysis in 2006.

1 Given this residual uncertainty associated
2 with the historic data, Cameco will be using results from
3 the most recent, and that is 2005-2006, fish samples to
4 assess conditions in Beaverlodge Lake.

5 In addition to the discussions and
6 investigations conducted with our primary contract
7 laboratory, Cameco has also undertaken other initiatives
8 to address this issue from a wider ranging perspective.
9 Cameco has taken a leadership role in the establishment of
10 a Canadian Industry Selenium Working Group to share
11 information, experiences and potentially resources
12 concerning this selenium issue.

13 Also, in November of 2006, this Canadian
14 working group participated in an industry workshop on
15 selenium with counterparts in the United States. One of
16 the initiatives agreed to for this North American group
17 was to work on standardization of selenium in fish flesh
18 analysis.

19 So we'll move on now and discuss some other
20 activities during the current licence period that have
21 been keeping us busy.

22 The Fookes Lake delta remediation. These
23 other activities, they're in addition to the ongoing
24 routine monitoring activities which also take up our time.
25 In 2005, remedial work on the Fookes Lake tailings delta

1 was carried out. This involved the placing of an
2 additional engineer cover over existing tailings boils on
3 the delta.

4 These boils had appeared over time as
5 artesian groundwater conditions in the delta carried
6 tailings up through the original waste rock cover
7 installed at the time of decommissioning.

8 Field investigations were also conducted
9 during the 2005 work to optimize the design and methods
10 for placement of a final remedial cover to address any
11 potential future boil activity. A proposal for this final
12 cover was approved by the agencies and is now planned for
13 implementation this summer.

14 Also, sticking with other activities,
15 financial assurance. Condition 2.2 of the current licence
16 required a financial guarantee for long-term monitoring
17 and maintenance of the facility to be in place by June
18 20th of 2005. Correspondence confirming this financial
19 assurance in the form of apparent government guarantee has
20 been provided to CNSC staff.

21 Correspondence confirming acceptance of
22 this form of guarantee was received from CNSC staff on
23 June 15th, 2005. A similar guarantee has also been
24 provided to the Government of Saskatchewan.

25 During the current licence period, Cameco

1 has continued its program of public consultation and
2 regulatory liaison through meetings, inspections and
3 tours. These activities will continue in the future,
4 providing updates and soliciting feedback from the public
5 and regulatory agencies.

6 In summary, Cameco is requesting a licence
7 amendment to extend the expiry date of the current licence
8 by nine months. While substantial progress has been made,
9 this extension will allow for a completion of outstanding
10 tasks prior to the next full re-licensing.

11 The proposed licence amendment requires no
12 other changes. The next re-licensing, which would be
13 later this year, would see the presentation of results
14 from the environmental investigations and a request to
15 release satellite properties.

16 Thank you for your attention and that
17 completes our presentation and we'd be pleased to try and
18 answer your questions.

19 **THE CHAIRPERSON:** Thank you very much.

20 We will now move to the CNSC staff
21 presentation, CMD 07-H4, and I'll turn to Mr. Barclay
22 Howden, the Director General responsible for this licence.

23
24 **07-H4**

25 **Oral presentation by**

1 **CNSC staff**

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MR. HOWDEN: Thank you. Good afternoon, Madam Chair and Members of the Commission. For the record, my name is Barclay Howden. I'm the Director General of the Directorate of Nuclear Cycle and Facilities Regulation.

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With me today are Mr. Kevin Scissons, Director, Uranium Mines and Mills Division, Mr. Tom Gates, Project Officer in the same division, and the rest of our licensing team for this facility.

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An application has been received from Cameco Corporation for an amendment to the Beaverlodge waste facility operating licence requesting that the expiry date of the licence be extended. As documented in the attached CMD, CNSC staff recommends that the Commission issue to Cameco Corporation a waste facility operating licence approving a one-year extension to the licence.

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21

I will now ask Mr. Gates to present CMD 07-H4.

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MR. GATES: Madam Chair, Commission Members, for the record, my name is Tom Gates. I'm the Site Project Officer for Beaverlodge.

25

Today, I will provide a brief introduction

1 to CMD 07-H4, background information, a review of the
2 application, CNSC CEAA determination, a summary of public
3 interests up to the time when staff CMD was submitted to
4 the Commission Secretariat, and then staff's conclusions
5 and recommendations.

6 Cameco Corporation, the licensee, has
7 provided an application to amend the waste facility
8 operating licence. The expiry date for the current
9 licence is March 31st, 2007. That's in about two months.

10 The extension was requested to allow time
11 for finalization of their special monitoring reports and
12 for regulator reviews and an opportunity for promulgation
13 of Saskatchewan's laws concerning reclaimed industrial
14 sites, which underpins Saskatchewan's institutional
15 control management framework.

16 This may allow the Commission the option
17 for exemption of low-risk decommissioned mine areas at the
18 Beaverlodge site at a later time, if all the CNSC
19 requirements can be met.

20 The location of the site is in Northwest
21 Saskatchewan on the north side of Lake Athabasca near
22 Uranium City. The Beaverlodge property was explored and
23 developed in the 1940s and '50s and the mill operated
24 until 1982. The Beaverlodge operation was decommissioned
25 by 1985.

1 In this photo taken from the northeast, the
2 downstream receiving environment of Beaverlodge Lake is
3 seen in the background. The picture also shows some of
4 Fulton Creek drainage system and the Fookes and Marie
5 Lakes, both of which received mill tailings during the
6 1950 to the 1982 period.

7 The red arrow shows the flow path of water
8 starting from the unimpacted headwaters of Fulton Lake in
9 the lower left. Also shown is the Mill Hill in the top
10 right and the Fookes Lake tailings delta in the lower
11 right.

12 In 2005, after 20 years of monitoring, the
13 Commission revoked the decommissioning licence and issued
14 a waste facility operating licence. It is important to
15 note that in issuing the waste facility operating licence
16 in 2005, two key licence conditions were added.

17 The first was to establish a financial
18 guarantee for long-term monitoring and maintenance of the
19 site and the second was for additional environmental
20 monitoring and reporting acceptable to CNSC staff.

21 To address the second item, six special
22 environmental and health studies were implemented
23 following significant consultations between staff, Cameco
24 and members of the Joint Regulatory Review Group. These
25 studies were designed to address concerns regarding

1 existing adverse aquatic effects and the acceptability of
2 the rate of natural recovery as the method of site
3 remediation.

4 As CNSC staff and JRRG reviews of the
5 reports have not been completed and some important reports
6 remain to be submitted, we are unable to provide our
7 findings or recommendations on those to the Commission.
8 The one-year extension will allow us to do that.

9 Overall, the licensee appears to be
10 addressing the issues but will still need to complete a
11 full synthesis of the information.

12 Application review. Staff have reviewed
13 the application and the information provided by the
14 licensee is complete. The current licence conditions for
15 the provision of a financial guarantee and special
16 environmental and health studies have been either
17 completed or are well under way. Please refer to CMD 07-
18 H4, Attachment 1 for study status.

19 Progress continues to be monitored at
20 regular meetings. The licensee has provided regular
21 monitoring and reporting in accordance with the licence
22 requirements. The licensee is in compliance with the Cost
23 Recovery Fees Regulations 2003.

24 The CNSC is not required to conduct an
25 environmental assessment under the CEAA because the

1 proposed licence amendment is captured by subsection 74(4)
2 of the CEAA, a transition clause. CEAA does not apply to
3 projects initiated before June 21, 1984.

4 Therefore, the CNSC is not required to
5 conduct an environmental assessment under the CEAA before
6 considering the issuance of an amended licence for
7 Beaverlodge as the project and the current activities
8 associated with it were initiated in 1982.

9 The Northern Saskatchewan Environmental
10 Quality Committee, NSEQC, remains interested in the
11 Beaverlodge site.

12 Cameco continues to facilitate meetings and
13 tour inspections of the site, which include JRG members.
14 Attachment 2 in the CMD list Cameco hosted meetings and
15 site tour inspections since April of 2005.

16 The NSEQC's interest at the Beaverlodge
17 site remains primarily in assuring local contracting for
18 monitoring and maintenance work and continued access for
19 hunting and recreational purposes. Consultations on site-
20 specific reclamation issues are being addressed on a case-
21 by-case basis, as sites are being considered for release
22 to provincial institutional control and, if acceptable, to
23 the Commission.

24 At the time of CMD submission to the
25 Secretariat, there was no significant interest by the

1 public in relation to the application or its proposed
2 licence extension. Uranium City Resources of Kirkland
3 Lake, Ontario, has expressed significant interest
4 concerning uranium exploration on decommissioned and other
5 legacy mine sites. They were informed of the licensee's
6 application for a licence extension and their intervenor
7 opportunities for this hearing.

8 Conclusions: CNSC staff concludes that
9 Cameco Corporation is qualified to continue to carry out
10 the activities that an amended licence will authorize
11 considering there is no change in the relevant
12 circumstances associated with the amended expiry date.
13 CNSC staff also conclude that there continues to be
14 assurance that the Beaverlodge site will be maintained and
15 monitored as required.

16 In the event that provincial regulations
17 and process under the *Reclaimed Industrial Sites Act* are
18 not completed prior to the next Beaverlodge licence
19 renewal, the licensee will have to delay seeking CNSC
20 exemptions from licensing requirements of their low-risk
21 satellite properties.

22 Recommendations: CNSC staff recommends
23 that the Commission accept the assessment of CNSC staff
24 that an environmental assessment under the CEAA is not
25 required to be carried out by the CNSC for the amendments

1 sought.

2 Accept the assessment of CNSC staff that
3 Cameco Corporation is qualified to carry out the
4 activities that the licence will authorize and will, in
5 carrying on those activities, make adequate provision for
6 the protection of the environment, health and safety of
7 persons and the maintenance of national security and
8 measures required to implement international obligations
9 to which Canada has agreed.

10 Accept the assessment of CNSC staff that a
11 one-year extension be approved. This extension, if
12 approved by the Commission, provides sufficient time for
13 CNSC staff and JRG Group to review and follow up on the
14 reports listed in Attachment 1 of the CMD. It also
15 provides sufficient time to consider appropriate actions
16 for the determination of appropriate management actions
17 such as mitigation or monitoring as required.

18 In addition, the one-year extension may
19 provide sufficient time to identify the CNSC's proposed
20 process for recommending potential site release exemptions
21 out of the site's waste facility operating licence pending
22 the outcome of the province's process under the *Reclaimed*
23 *Industrial Sites Act*. If the province's process is not
24 completed, CNSC staff will address these implications
25 during the next Beaverlodge licence renewal.

1 The licensee continues to manage the site
2 and follow-up studies in consultation with the JRG and the
3 public, and a one-year extension is not expected to change
4 the findings regarding the second bullet on this side.

5 Staff recommends that, pursuant to Section
6 24 of the *Nuclear Safety and Control Act*, that the
7 Commission amend licence condition 2.2 to read;

8 "The licensee shall maintain a
9 financial guarantee for long-term
10 monitoring and maintenance of the
11 facility that is acceptable to the
12 Commission or a person authorized by
13 the Commission"

14 And, amend the current waste facility
15 operating licence as WFOL-W5-2120.1/2008 with an expiry
16 date of March 31, 2008. A copy of the draft amended
17 licence was attached to the CMD for your consideration.

18 This completes staff's summary. Thank you
19 and I will turn it back to Mr. Howden.

20 **MR. HOWDEN:** Thank you. Barclay Howden
21 speaking.

22 Madam Chair, that completes our
23 presentation and staff is prepared to respond to
24 questions.

25 **THE CHAIRPERSON:** I wonder if I could start

1 by asking about the license length question, as Mr.
2 Jarrell mentioned, this was one of the issues last time in
3 terms of licence length and here we are again. And it is
4 a lot of work to put together a licence from all parties
5 and for the Commission as well to hear it.

6 Mr. Gates mentioned at the end that this
7 one year would allow -- I forget exactly the wording, may
8 allow for sufficient time for you to assess what the
9 province is looking at and look at where the Commission
10 staff would recommend going next, if I understood you more
11 or less, your words.

12 What exactly would be the time period that
13 would allow it to be more certain than "may"; that would
14 allow, in your mind, a complete workup by the province and
15 then a complete workup by you, so that we would be really
16 looking at something that would be a step forward for us?

17 **MR. SCISSONS:** Kevin Scissons, Director of
18 Uranium Mines and Mills Division.

19 I believe we have representatives from
20 Saskatchewan Environment attending in our Saskatoon office
21 and, as you are talking specifically on the status of the
22 provincial regulations, I believe Mr. Rob Kidd, from
23 Saskatchewan Environment is present in our Saskatoon
24 office. If we can bring them online, or momentarily bring
25 him online, and he will be able to address you, as both

1 Mr. Kidd and myself were informed last week in Regina as
2 to the status.

3 And I would appreciate if we could let a
4 provincial representative speak to that, and though it is
5 tied in to this licence extension, it is still an effort
6 we have to resolve at the province before we move on.
7 Otherwise, we would delay potentially any recommendation
8 to the Commission to exempt any of the properties as the
9 provincial legislation is key to us.

10 So if we have an opportunity to bring them
11 online, I would like Mr. Kidd to address this.

12 **THE CHAIRPERSON:** --- because it's a
13 provincial issue.

14 Anyway, I guess, while we are waiting for
15 that to be connected, Mr. Jarrell, there is a
16 recommendation of the staff CMD to amend licence Condition
17 2.2 to require the licensee to maintain a financial
18 guarantee for long-term monitoring and maintenance. Do
19 you have any problem with that licence condition?

20 **MR. JARRELL:** John Jarrell, for the record.

21 No, I think my credibility on predicting
22 time is somewhat a jeopardy here, both in 2004 and now.

23 As I said in my opening comments, we are
24 trying to balance, I think, expediency of advancing the
25 process and thoroughness and I would take my lead from the

1 CNSC staff.

2 **THE CHAIRPERSON:** Well, I could be
3 corrected, but I don't think anything would prevent you
4 from coming forward earlier if you were ready to come
5 earlier. I think the issue for us is trying to be
6 expedient for you and for the staff and frankly for
7 ourselves as well. So trying to give enough time but
8 realizing -- oh, they're connecting I think, it says it's
9 ringing.

10 Mr. Kidd, are you there?

11 While we are waiting for Mr. Kidd, Dr.
12 Barnes will pursue another area of questioning.

13 Mr. Kidd, are you there?

14 We will pursue another avenue of questions
15 and we'll come back to this.

16 Dr. Barnes?

17 **MEMBER BARNES:** I had just two other
18 questions beyond the duration; it's really maybe two
19 comments as opposed to questions. The tailings boils I
20 was intrigued with and the explanation was that this was
21 artesion within the Delta. I really would find that hard
22 to believe, depending on what you mean by artesion.

23 I would just suggest that staff have a good
24 look at this. My guess is it's simply an instability of
25 some of the components of the tailings that have been put

1 in there, sort of a density difference in that there is a
2 sort of diapiric rise as opposed to imagining as some
3 artesian that's bringing this material up. Those are
4 different -- if it was significantly different, then the
5 approach to so-called engineer, the issue would be quite
6 different, potentially, and just trying to put more covers
7 on may not be the solution so that's just a comment.

8 The other comment I make is with the
9 analytical problems of analyzing fish flesh using,
10 particularly, ICPMS. I do ICPMS on some other vertebrate
11 material in other parts of my life and you might -- you
12 have a problem dealing with the flesh, as you say, because
13 of the carbon issue.

14 You might want to look and see if it's not
15 worthwhile looking at the actual skeleton material of the
16 fish, particularly the teeth, as opposed to the more open
17 bone structure and, in that case, you can use laser
18 ablation ICPMS with just a micron or a few micron
19 essentially boring into particularly the enamel part of
20 the -- the tightest part of the fish tooth.

21 So typically fish take up these trace
22 elements and with ICPMS as you know, you get 23 analyses
23 with one push of a button, and that tends to be rather
24 more reliable I think than the problems you're having
25 trying to actually analyse flesh as such. There's fair

1 literature on this.

2 **THE CHAIRPERSON:** Dr. Dosman, do you have
3 any comments or questions?

4 **MEMBER DOSMAN:** Well only on the same line,
5 Madam Chair, that you were discussing. Given the progress
6 in the last nine months, I'm just wondering how realistic
7 nine months or even a year is when you look down the pipe
8 and what the chances are that we'll all be here again in
9 less than a year doing about the same thing and where the
10 wisdom is in recommending an appropriate licence period in
11 the circumstance.

12 **THE CHAIRPERSON:** Since Mr. Kidd doesn't
13 seem to be here, I think we are going to have to ask you,
14 Mr. Scissons, to give us your best guess as to where
15 things are and why did you recommend a year, knowing that
16 we would be back here probably -- in order to do a year,
17 we'd have to be back here in 10 months or something.

18 **MR. SCISSONS:** Kevin Scissons.

19 The discussion with the staff members in
20 Regina are associated directly with the regulations of the
21 province, though it has to be passed through their
22 legislature, which is always an unknown, but the plan is
23 to get it there, I believe, in or by March.

24 So they are not that far away, but barring
25 the unforeseen within a legislative system, those

1 regulations may not indeed pass.

2 Though that is important overall to even
3 national or international in the sense of institutional
4 control mechanisms to the landlord, in this case the
5 province, the key thing here really for the Beaverlodge
6 property is focused on the environmental reports and the
7 compilation of that. And this one-year extension was very
8 key for us to have these reports in place and the synopsis
9 put together by the licensee.

10 As they have noted, the last two reports
11 now may not be coming until the end of February. So that
12 timeline for us to review, complete, assess, do any follow
13 up, and then look at the synopsis, and then move forward
14 with recommendations it may be a bit compressed and the
15 point is taken that where the comfort zone may be,
16 especially with reports and the synopsis not all pulled
17 together.

18 I would just add that staff also make note
19 of this in our aggressive timeline to move this forward
20 and, all things considered, the point is well taken about
21 how far we will be along the process.

22 The two things are the provincial status,
23 that outcome, if it is not complete, it may be a future
24 request to come to the Commission in regards to release of
25 any of the potential sites for exemption under a separate

1 licensing action down the road. But in terms of the
2 environmental reports and the synopsis those are very key
3 to us in coming back to the Commission to move forward on
4 the overall environmental footprint of this historical
5 facility.

6 **THE CHAIRPERSON:** I just would like to
7 comment; that for a long time, even very senior
8 bureaucrats have tried to estimate what legislatures, some
9 politicians will do and politicians decide on their own
10 what they want to do. They can decide when they receive
11 it and they certainly can decide if they want to approve
12 it or not. So I think it would be foolhardy for us to try
13 to do that and taking it into account.

14 Maybe I could word it another way and
15 starting with Cameco, what would be wrong in having a two-
16 year licence?

17 **MR. JARRELL:** John Jarrell, for the record.

18 At present, I think nothing. I think you
19 raised the point that we could raise the issue of the
20 satellite separately, as a separate issue.

21 My view on this is there's two ways;
22 there's the one you set sort of a baseline licence and
23 then deal with specific issues as they come up or you try
24 to obviously set the licence period for certain actions
25 which is what we tried to do in the two-year forecast. I

1 recall last time you suggested that three years might be
2 appropriate and I'm mindful of that.

3 Certainly, I think at this stage we're
4 really not -- we don't have an issue one way or the other.
5 Really, what we were seeking I think was perhaps push the
6 system a little from the point of view of trying to
7 advance it as best we could, but there are many ways to
8 skin that cat.

9 **THE CHAIRPERSON:** From the staff point of
10 view, do you see any disadvantage to a longer licence
11 period? I used two years. I'm not really saying that is
12 what the Commission will decide. I'm just asking if you
13 see any disadvantages from your point of view.

14 You have talked about the oversight and the
15 safety of the facility. So if I'm correct, from your
16 recommendation, you don't see any issues there?

17 **MR. SCISSONS:** Kevin Scissons.

18 That would be correct. If there is any
19 reason to come even sooner than that, if there was a two-
20 year window, the recommendation on the licensee if they
21 wanted to move in sooner, of course they could ask for
22 revocation of their licence and a new licence issued under
23 whatever terms and condition the Commission would seem
24 appropriate.

25 That two-year window would not be a

1 deterrent whatsoever for us. Our ongoing oversight and
2 monitoring and as well as the licensee's monitoring are
3 all in place and that would be continued regardless of the
4 licence length.

5 **THE CHAIRPERSON:** We seem to be having
6 glitches in the system. So we will just proceed from an
7 audio point of view.

8 Is anyone from Saskatchewan
9 Environment in the Saskatoon office and, if they can,
10 would they like to comment with regards to this
11 application for licence, particularly including licence
12 length?

13 Mr. Kidd or Mr. Yao?

14 **UNIDENTIFIED FEMALE:** Yes, Rob Kidd is
15 present. Can you hear us?

16 **THE CHAIRPERSON:** Yes, we can.

17 **UNIDENTIFIED FEMALE:** Okay, go ahead,
18 please.

19 **MR. KIDD:** This is Rob Kidd from
20 Saskatchewan Environment, for the record.

21 I would like to just indicate the status of
22 the institution control management framework.

23 Since the framework was presented to CNSC
24 in February 2006, the province has approved the framework
25 and has received approval of the *Reclaimed Industrial*

1 *Sites Act* which is a part of that, and this was approved
2 in legislature in May of 2006.

3 In June 2006, a draft of the regulation was
4 provided to industry and the CNSC for review and comment,
5 and since that time there have been a number of meetings
6 with regards to the regulations with industry, and also we
7 made a presentation of the regulations to the
8 Environmental Quality Committee in November in La Ronge.

9 Earlier this week, sort of the final
10 meetings with industry, we feel there is a final draft
11 that will be ready and our belief is that we will be
12 presenting this to the CNSC for review and as well to
13 industry review for January 31st. This draft will then
14 move forward into the provincial approval process and
15 proclamation of the Act, which we believe will be in four
16 to six weeks.

17 With regards to your other question, Madam
18 Chairperson, with regards to the two-year licence, we
19 don't see an issue with a two-year licence.

20 **THE CHAIRPERSON:** I didn't want to give a
21 sense of what the Commission will decide, just a longer
22 licence.

23 Thank you very much, Mr. Kidd.

24 Any further questions at this point from
25 the Commission Members or can I move to interventions?

1 Okay, we're going to move to interventions.
2 We earlier heard that Mr. Penna was ill. Is Mr. Penna
3 there or should we move that as a written submission?

4 **MS. PENNA:** You can use it to a written
5 submission. However, I have incorporated some of his
6 comments into my presentation here because I was
7 understanding that my written submission in making an oral
8 submission was to basically highlight certain points that
9 I had made in my written submission, okay?

10 **THE CHAIRPERSON:** That's right. Well, the
11 Tribunal is quite informal, Ms. Penna. So first of all
12 what we will start out with is we will take 07-H4.2 as a
13 written submission for Mr. James V. Penna.

14

15 **07-H4.2**

16 **Written Submission from**

17 **James V. Penna**

18

19 **THE CHAIRPERSON:** Are there any questions
20 or comments from the Commission Members with regards to
21 this submission?

22 For the record, there are none.

23 We will now then move to the submission by
24 Mrs. Marion Penna. Mrs. Penna, we have allocated 10
25 minutes for your presentation. So you can use your 10

1 minutes as you see fit. This is based on CMD 07-H4.3.

2 Mrs. Penna, you have the floor, ma'am.

3

4 **07-H4.3**

5 **Oral presentation**

6 **by Marion H. Penna**

7

8 **MS. PENNA:** Thank you.

9 Cameco's application for an amendment to
10 the Beaverlodge waste facility operation licence is in
11 effect an admission of its failure to fulfil its
12 responsibilities under the original licence.

13 Indeed, it is also an admission of its
14 inability to remediate the site simply because the site is
15 so contaminated that it cannot be truly remediated. Is
16 Cameco extricating itself from the responsibility of
17 remediating what cannot be remediated and shifting the
18 problem to the government and people of Saskatchewan?

19 It appears Cameco is doing just that by its
20 first reason for applying for this extension; to allow
21 sufficient time for the Province of Saskatchewan to
22 promulgate the *Reclaimed Industrial Sites Act* and
23 associated regulations in 2007 regarding institutional
24 control.

25 The Act is welcomed by industry. It was

1 developed with their input and advice every step of the
2 way. Eric Klein publicly acknowledged in legislature:

3 "It's important to note this
4 legislation was jointly developed by
5 my department, Saskatchewan
6 Environment, and Saskatchewan Northern
7 Affairs at industry's request."

8 In other words, Cameco and AREVA have been
9 involved in writing the very legislation and establishing
10 the regulations that will allow them to shift the problems
11 of decommissioning and remediation to the government and
12 the people of Saskatchewan.

13 As my husband had sent you two images, the
14 exact photos are used in the Saskatchewan Environment 2005
15 document entitled "Institutional Control Management
16 Framework" and Cameco AREVA's 2005 public consultation
17 brochure. The same images in uranium mining publication
18 and propaganda are appearing in government's publications
19 and this begs the question. One would be, "Who is in
20 control; government or industry?"

21 Does final closeout mean that under this
22 Act, Cameco will, as stated, release as many areas covered
23 by the licence into the Province of Saskatchewan's ICMF
24 and thereby, except for financial assurance for an unknown
25 number of years, not be responsible for monitoring?

1 Will this really end up being the province
2 paying?

3 Apparently, legislation will require the
4 establishment of funds for long-term monitoring and
5 maintenance. What is defined as long-term? What is meant
6 by remediation of unforeseen future events? What could be
7 considered unforeseen future events?

8 Shouldn't modelling include water
9 seeping through fissures wearing away openings, earth's
10 movements every minute of the day, climate change results
11 of water increase and decrease, changes in soil, et
12 cetera?

13 Surely we should have learned by now
14 nothing is guaranteed predictable. What remediation would
15 be possible? With radioactive elements such as radium-
16 226, toxicity is beyond remediation.

17 Indeed, it's stated that radium-226
18 and total dissolved solids would not meet close-out
19 objectives at any point in the foreseeable future and
20 uranium concentrations were expected to meet the close-out
21 objections, but only in the long-term. That is, like, 200
22 years.

23 SENES Report states:

24 "It is now expected that radium-226
25 objective will not be in the outflow

1 from Greer Lake until about the year
2 2150 and that the uranium objective
3 will not be met until approximately
4 2300, 300 years from now."It appears
5 from the report that in 2005 all
6 close-out objectives were met at all
7 stations except for radium-226, where
8 it all exceeded radium-226. Some
9 fluctuate from year to year. Some are
10 higher than previous years. Some
11 continue to remain well above the
12 close-out objectives, proving that
13 radium-226 is what it is, an alpha
14 emitting problem, along with its
15 progeny, now and for thousands of
16 years.

17 As a nuclear safety commission, you are
18 commissioned to be concerned about radioactive elements.
19 Control has been eliminated from your title, formerly
20 Atomic Energy Control Board, because you or anyone else
21 cannot control radioactive elements once you let them
22 loose.

23 Unfortunately, Northern Saskatchewan is a
24 big laboratory, an experimental proving ground that
25 uranium mining is not good for the environment.

1 Regarding health fish reports that selenium
2 is the probable cause of eye defects, specifically
3 cataracts, if there had not been uranium mine tailings
4 contaminating the water, would there have been an increase
5 in selenium? If selenium is the result of uranium mine
6 tailings, then indirectly uranium mine is the problem.

7 SENES reports:

8 "Selenium levels in Beaverlodge Lake
9 and Martin Lake are predicted to
10 gradually decline to below the
11 guideline within the next 50 years."

12 Also according to SENES, a high incidence
13 of abnormalities in lake chub fish in three impacted lakes
14 peaked out at 97 percent in 1995. These are disturbing
15 reports.

16 I commend CNSC for their concerns.
17 Significant adverse effects on aquatic environment basic
18 to food chain health and natural recovery may not
19 necessarily be sustained or continue at an acceptable
20 rate.

21 What constitutes a significant adverse
22 effect? Cameco reports Golder found 162 fish, assessed 41
23 percent had some type of external abnormalities. What
24 about internal abnormalities? What organs or flesh were
25 tested? What part of fish would have evidence of

1 radionuclide toxicity? What would nature consider an
2 adverse effect?

3 I've been told that mucus should be
4 tested for alpha contamination. CNSC describes
5 Beaverlodge as low-risk sites where uranium ore was low
6 grade. What problems will we see when high-grade ore
7 mines will be decommissioned?

8 The second reason given by Cameco is to
9 allow sufficient time for completion and CNSC staff's
10 review of Cameco's special investigation reports that are
11 underway for the decommissioned site. CNSC staff is
12 recommending an extension based upon incomplete review of
13 Cameco's own special investigation reports.

14 Another reason Cameco gives for the licence
15 extension is to provide sufficient time to consider
16 appropriate actions for establishment of additional
17 mitigation or monitoring if required.

18 What are some of the options or range of
19 actions that are potential under such a provision when you
20 are dealing with a problem that is calculated to persist
21 for over 100 years?

22 Cameco's request for additional time is
23 more evidence of the seriousness of this situation.

24 If in the staff recommendation it is stated
25 that there has been no significant interest by the public

1 in relation to the application or its proposed licence
2 extension, the euphemistic use of the term "public" is
3 scandalous.

4 Very few people know or are aware of what
5 is happening. Public interest can't be judged upon the
6 response to an advertisement in the newspaper or a daily
7 purview of CNSC website.

8 Who is considered by CNSC to be the public?
9 I am the public. I am one of many concerned about the
10 mess of Beaverlodge and the need to do cleanup.

11 During the uranium mine hearings in the
12 1990's, concerns were constantly raised about the cleanup
13 required of old uranium mine areas. Perhaps you can see
14 the result of those of the public who took volunteer time,
15 who are deeply and sincerely concerned about uranium
16 mining and the complete nuclear chain, and were basically
17 dismissed.

18 Seeing that AECB and CNSC basically hands
19 out licences has turned people off of any time given to
20 reviewing documents. Do we simply play a role to make it
21 look good for the government body? Is the public a mere
22 nuisance to contend with? Why has the government set up
23 procedures in which only one part of the nuclear chain is
24 always separated from the rest?

25 Waste and emissions have continually been a

1 problem and the industry cannot overcome. Not just mining
2 and milling; it is mining, milling and waste control and
3 these have not been able to be done safely.

4 There is a systemic and concerted effort to
5 manage public input into nuclear and environmental issues
6 while trying to maintain a facade of public consultation,
7 without real public debate and democratic involvement.

8 I want to ask, why are questions asked by
9 intervenors in their written submissions not discussed
10 during hearings? I appreciate that some mention is made
11 of intervenors' concerns in the record of procedures and
12 reasons for decisions.

13 In 1986, Eldorado's report was titled
14 "Departure with Dignity". How dignified is this mess left
15 behind by the departure of Eldorado? How could AECEB
16 condone this? Evidently, they did not control the
17 situation.

18 What has CNSC learned from this? Surely
19 Eldorado's Cameco needs strict surveillance. Even though
20 it is next to impossible to do nuclear safely, CNSC has to
21 demonstrate itself to be a public and environmental
22 nuclear safety commission, not a nuclear survival
23 commission.

24 Because of the commissioned legislation and
25 forthcoming regulations, the industry must be held to

1 rigorous account. This Beaverlodge project should be a
2 wake-up call to do an historical review and analysis of
3 modelled, projected and actual performance of all
4 Saskatchewan tailings management facilities.

5 There has been long enough experience now
6 of problems encountered to justify a thorough analysis of
7 this massive experiment. Such a study must be performed
8 by an independent agency at arms length from the industry
9 and federal and provincial regulatory agencies. It should
10 be a human right to know truthful impacts on our
11 environment and the health of future generations.

12 Thank you for your time.

13 **THE CHAIRPERSON:** Thank you, Mrs. Penna for
14 joining us.

15 Are there any questions for Mrs. Penna?

16 Mrs. Penna, I would just say that the
17 oversight of the CNSC is on all the uranium facilities
18 that are in whatever stage of the cycle in Saskatchewan
19 and other parts of Canada, for example, in northern
20 Ontario. So the Commission does keep rigorous oversight
21 and control of all the facilities that are in Canada and
22 probably, I think arguably, the nuclear industry has more
23 vigorous regulation than most if not all industries in
24 Canada.

25 And we certainly do value input from all

1 the intervenors that appear before us, and written is as
2 important as oral for us in our considerations. And
3 sometimes we ask questions and sometimes we have already
4 heard the information from others, but we certainly take
5 it into account. So we do value that and we consider it
6 important to keep improving that.

7 We will have vigorous oversight of the
8 Beaverlodge property until -- and Saskatchewan government
9 expects that too from the CNSC until the point is that it
10 can be turned over in other areas. I can assure you the
11 Saskatchewan government has vigorously told us that they
12 want to know where things are. So I think transparency on
13 the status of Beaverlodge, such as in the CMDs from the
14 industry and staff, I believe is an important step in
15 ensuring that people in Saskatchewan are aware of the site
16 and what happens there.

17 So I would like to assure you that we are
18 paying attention to this site and it will be historical if
19 and when this goes forward into its next stage and we are
20 paying attention to that.

21 So thank you very much.

22 We would like then to now move to the
23 written submission from Linda Murphy, 07-H4.4.

24
25 **07-H4.4**

1 **Written submission from**

2 **Linda Murphy**

3

4 **THE CHAIRPERSON:** Are there any comments or
5 questions from Commission members?

6 Noting none, we'll move then to the written
7 submission from Ms. Eleanor Knight, CMD 07-H4.5.

8

9 **07-H4.5**

10 **Written submission from**

11 **Eleanor Knight**

12

13 **THE CHAIRPERSON:** It is written but Ms.
14 Knight is in Saskatoon if there are specific questions.
15 Are there any questions from Commission members with
16 regards to this?

17 No? Dr. Dosman.

18 **MEMBER DOSMAN:** Madam Chair, I think it's
19 worth noting on Ms. Knight's written presentation some
20 misunderstanding of the relationship between the
21 Commission and government as the Commission is an
22 independent body.

23 **THE CHAIRPERSON:** Yes, thank you very much.
24 That is important to note that there is -- the federal --
25 the CNSC is an independent tribunal. It is appointed to

1 be independent and it is independent of all government,
2 industry, political involvement and special interest
3 groups as well. So it serves as an independent body.

4 Thank you very much, Dr. Dosman, for
5 mentioning that.

6 We will next move to the next submission, a
7 written submission from Mr. Bill Adamson, CMD 07-H4.6.

8

9 **07-H4.6**

10 **Written submission from**

11 **Bill Adamson**

12

13 **THE CHAIRPERSON:** Are there any questions
14 or comments with regards to this submission?

15 Noting none, this completes the public
16 hearing today.

17 With respect to this matter, I propose that
18 the Commission confer with regard to the information we
19 have considered today and then determine if further
20 information is needed or if the Commission is ready to
21 proceed with a decision and we will advise accordingly.

22 This brings to the close the public
23 hearings of the Canadian Nuclear Safety Commission. I'd
24 like to thank you all for your attendance and I realize it
25 was a bit delayed today but thank you very much for all

1 your patience here and in Saskatoon.

2 Thank you very much.

3 --- Upon adjourning at 4:50 p.m.

4