

1           **HEARING DAY ONE**

2           **Rio Algom Limited:   Radioactive Waste Facility**  
3           **Operating Licence**

4                           THE CHAIRPERSON:   With those  
5           logistic remarks, we will now move to Hearing Day  
6           One in the matter of the application by Rio Algom  
7           Limited for a Radioactive Waste Facility Operating  
8           Licence.

9                           March 19th was the deadline set  
10          for filing by the applicant and by CNSC staff.  
11          April 11th was the deadline for filing of  
12          supplementary information by the applicant and  
13          Commission staff.

14                          The applicant, Rio Algom Limited,  
15          filed supplementary information as contained in  
16          CMD document 02-H10.1A.

17                          I will call upon the  
18          Vice-President of Health, Safety, Environment and  
19          Community of BHP Billiton Base Metals to make an  
20          oral presentation as indicated in document  
21          CMD 02-H10.1 and CMD document 02-H10.1A, Ms Wiber.

22

23           **02-H10.1/02-H10.1A**

24           **Oral presentation by Rio Algom Limited**

25                          MS WIBER:   Thank you, Madam

1 President and Members of the Commission.

2 Today I will be presenting our  
3 slide presentation to introduce you really to the  
4 high points of our proposal, our submission, and I  
5 hope we are able to capture some ideas and the  
6 major issues that we will be focused on.

7 With me to help present and answer  
8 questions, on my left is Art Coggan. Art is  
9 responsible for the day-to-day operations at  
10 Elliot Lake. He is our Manager of Environment and  
11 Decommissioning. He has been with Elliot Lake for  
12 about 24 years and continues with us in that  
13 capacity.

14 On my right is Ken Black. Ken is  
15 Director of Closed Mines for HBP Billiton Base  
16 Metals, and Ken has responsibility for all of our  
17 closed properties in Canada, including East  
18 Kemptville site in Nova Scotia, Poirier site in  
19 Québec and Island Copper Mine in B.C. as well as  
20 the Elliot Lake Properties.

21 Behind me in the row, to my right,  
22 to your left, is Paul McKee. Paul is a principal  
23 with Beak Consultants, and he has done work in the  
24 Environmental Effects Monitoring Program, was very  
25 much part of the design and the ecological risk

1 assessment that was part of the environmental  
2 assessment.

3 In the middle is Randy Knapp, a  
4 principal with Senes Consultants. They have been  
5 involved in Elliot Lake Properties for I think  
6 more than 20 years. Randy has a tremendous  
7 historical knowledge of the Elliot Lake area.

8 Shiu Kam, an associate with Golder  
9 Associates. Shiu is a geotechnical engineer.  
10 Golder is the design engineer of record for the  
11 tailings facilities in Elliot Lake, not just for  
12 the Historic Properties, but also for the other  
13 licensed properties, Quirke, Panel and Stanleigh.

14 So that's who we are and I think  
15 that this group can answer your questions. At  
16 least we can try and Day Two, of course, is an  
17 opportunity as well.

18 The agenda is shown. We would  
19 like to introduce the corporate structure and  
20 organization of the company. It has changed a  
21 little bit, not too much.

22 Next to review the facility  
23 remediation, the kind of work that we did for each  
24 of the properties.

25 Give you some site photos -- these

1           were taken in 1999. Describe the remediation  
2           objectives and the criteria we used to design  
3           reclamation for each of the sites.

4                         Review the highlights of the  
5           Environmental Effects Monitoring Program, the  
6           assessment results. Public consultation that we  
7           did as part of our work, and make some concluding  
8           remarks.

9                         On our corporate structure, Rio  
10          Algom Limited, even after the merger and takeover  
11          of BHP Billiton continues to be the legal entity  
12          that owns the Elliot Lake Properties. Rio Algom  
13          Limited will continue to exist. It has the assets  
14          that it had before with the exception of the sale  
15          of metals distribution and the cash from that sale  
16          is still part of Rio Algom Limited.

17                        The company does produce an annual  
18          report. It continues to have a Board of Directors  
19          and I continue to report to the President of Rio  
20          Algom Limited and to that board.

21                        Of course, Rio Algom Limited is a  
22          wholly owned subsidiary of BHP Billiton.

23                        The current management at the  
24          Elliot site is essentially unchanged with Art  
25          Coggan, as I mentioned, in care and control of the

1 sites.

2 Of course, Elliot Lake is subject  
3 to the corporate HSEC policy, standards and  
4 systems that we have. We do regular internal  
5 audits of our programs as well.

6 The next slide gives you a picture  
7 of the organization. You can see the Board of  
8 Directors of Rio Algom. The annual report, by the  
9 way, is published and is available on the web. I  
10 don't have the last report with me, but it's  
11 available.

12 The President, John Bush, myself  
13 reporting to John Bush as well as to the President  
14 of BHP Billiton Base Metals, and to the corporate  
15 HSEC Vice-President for the global company.

16 You can see Ken Black, Art Coggan  
17 reporting to him and the control of the sites that  
18 Ken has.

19 I also have in my staff three  
20 professionals: One in environment, safety and  
21 community and these staff are also available to  
22 advise and assist.

23 The next slide is giving you a  
24 picture of the area. It's quite difficult to see  
25 much detail, and I think we have later on another

1 slide that shows a monitoring locations that we  
2 will come back to.

3 At the bottom is the Pronto  
4 Tailing Site. I don't know if I can point to  
5 different points of it with this technology, but  
6 there are five sites subject -- the mouse can  
7 apparently do that for me.

8 So starting at the North Channel  
9 of Lake Huron is the Pronto site and then moving  
10 up is the Nordic Tailing Site, and then Lacnor,  
11 Milliken -- you are wondering where I will go  
12 next -- the Spanish American Tailing Site, and  
13 then the top three the Panel Site, the Quirke Site  
14 and Stanleigh. These are already licensed. They  
15 have decommissioning licences.

16 So I think really these five  
17 historic sites. They were all closed down in the  
18 1960s and you might know that the licences were  
19 rescinded in the late 1970s and we are here now to  
20 licence them again.

21 The Tailings Management Areas for  
22 these five sites are all contained within the  
23 Serpent River watershed, and that's colour shaded.  
24 You can see the shading of the watershed, and  
25 within 20 kilometres of the City of Elliot Lake

1           that you can see there.

2                           Overall, I think the company is a  
3           long-time licensee with a reasonably good record  
4           in compliance. I think we have been okay.

5                           On the remediation that we did at  
6           the various sites, the remediation for the  
7           Historic Properties is quite similar and  
8           consistent with the work that we did for Quirke,  
9           Panel and Stanleigh. Of course, the work under  
10          these licences went through quite a rigorous  
11          public consultation under the FEARO process and  
12          formal public hearing.

13                          The steps involved in general for  
14          the site rehabilitation and mine site areas  
15          included the removal of the plant site  
16          infrastructure; the sealing of mine openings,  
17          relocation and removal of radioactive substances  
18          and contaminated soil; covering waste rock areas;  
19          recontouring and revegetating and all of this work  
20          done with the advice and with the knowledge and  
21          regular review and meetings with the Joint Review  
22          Group. This was a multi-agency group made up of  
23          federal and provincial government bodies to help  
24          guide us as we went through the work.

25                          This was a very effective group, I

1 think, in being sure that the various ministries  
2 and agencies were really understanding together  
3 how the issues should be managed, and we heard  
4 before, there is sometimes some overlap and you  
5 want to be sure nothing is falling through the  
6 gap.

7 All activities aimed to protect  
8 public health and safety in accordance with the  
9 federal and provincial requirements, and at the  
10 outset of the project we identified what those  
11 requirements were by looking at both legislation  
12 and putting together our criteria.

13 The technologies that we used for  
14 tailings remediation included water cover, dry  
15 covers and, of course, direct vegetation with  
16 water treatment as a drainage.

17 The next series of photos are  
18 quite old. They are from 1999 so they are two and  
19 half or so years old, three years old, but I think  
20 still they give you a picture of what they look  
21 like.

22 The first property is Milliken.  
23 It's probably the smallest site. Its tailings,  
24 you can see, has formed a wetland and there are  
25 some striated marks or channels that look like



1 through the area.

2 In the 1970s there was a thought  
3 that to drain this area -- it's a naturally  
4 low-lying swampy area. There was a thought we  
5 should drain it, but there was evidence of acid  
6 rock drainage and we realized that keeping it  
7 covered with water was going to be a better  
8 management solution. So you can see at the base  
9 of it the low berm that was built to contain the  
10 water. It's quite a successful wetland area.

11 This is our smallest tailings  
12 deposit of the group.

13 The next photograph is the Spanish  
14 American Property. It's about half a million  
15 tonnes. It's quite a tidy site. It's completely  
16 water covered. There is a small area at the top  
17 where the tailings are under the water. There is  
18 a low berm which ends at the left-hand side of the  
19 screen, less than two metres. So it's very  
20 stable. It's built on rock. A very  
21 straightforward site and it's performing quite  
22 well. The strategy, of course, with water covers  
23 is to prevent oxidation of sulphides.

24 The next site is Lacnor. This  
25 site, as you can see, it looks like roads along

1 the top of it. Now I think most of these roads  
2 are vegetated. There is some access tough for  
3 inspection and so on.

4 You might point out, Ken, the  
5 drainage, the acid water collection ditch along  
6 the side of the tailings area that collects acid  
7 water into the collection pond at the bottom of  
8 the screen.

9 That water drains through a  
10 channel into the Nordic treatment system and you  
11 can see Nordic off the map on the left. There is  
12 a white area. That was the quarry where we  
13 quarried the rock for upgrading the dams. The  
14 steps here were to improve the drainage of the  
15 surface of the tailings so that in storm flows we  
16 wouldn't have erosion, to revegetate and to  
17 upgrade the parameter dams to be sure that the  
18 sites were well contained, and then effluent  
19 treatment to adjust pH and reduce metals.

20 At the Nordic Site, again the  
21 tailings were revegetated. The surface drainage  
22 controls were installed. There is ditching to  
23 have good storm control and also to collect acid  
24 water. The acid water is collected in a ditch  
25 that is showing as the arrow is going to the

1 treatment lime addition point. The water then is  
2 going to the Nordic Settling Pond where the sludge  
3 is settled out and the water overflows.

4 Then to the bottom left is a  
5 collection pond again. There is surface drainage  
6 from the other tailings are called the West Arm  
7 and that's revegetated. The water from that site  
8 is acidic and it's collected and also goes to the  
9 Nordic Settling Pond for treatment.

10 The next slide is Pronto and again  
11 the steps were very similar. The surface of the  
12 tailings were recontoured for good drainage and  
13 good erosion control. The white area at the top  
14 of the screen in this shot is not yet finished.  
15 Because there were fine tailings here, it was more  
16 difficult to establish vegetation and here we use  
17 paper sludge to provide a good growing base for  
18 the plants. This work is finished this year. We  
19 do have one area to revegetate, I think, this  
20 year.

21 We have to do that work in the  
22 wintertime because the tailings are quite soft and  
23 when it's frozen we can get on it to put down the  
24 amendment.

25 The former mine site is in the

1 foreground. Again, it's acid water collection to  
2 the collection pond. The lime addition point and  
3 the Pronto Settling Pond for precipitates and the  
4 clear water overflows.

5 The reclamation objectives and  
6 criteria, of course, were based on the previous  
7 work that we did for Quirke, Panel and Stanleigh  
8 and these objectives and criteria were consistent  
9 with that work.

10 Basically the objectives for  
11 historic tailings and for Quirke, Stanleigh and  
12 Panel were to ensure long-term containment and to  
13 ensure that our environmental engineering criteria  
14 were met.

15 When we examined these properties  
16 for licensing we wanted to be sure that the  
17 strategy going forward was going to be robust and  
18 there were alternative evaluations conducted for  
19 each of the properties to be sure that the designs  
20 were still the right designs for long-term  
21 conditions.

22 The criteria that we used for dam  
23 stability, the design was actually based on a 1 in  
24 1,000 year seismic event. That's standard  
25 engineering practice, with an evaluation of

1 consequence under 1 in 10,000 year seismic event.  
2 We use that to identify or to be sure that even  
3 under these most severe conditions there would be  
4 no risk of catastrophic failure for any of the  
5 sites and we use that analysis to revise our  
6 designs if we needed to to avoid that catastrophic  
7 event.

8 So even under the most severe  
9 event, we would not experience a catastrophic  
10 failure at any of the sites.

11 In the hydraulic design -- this is  
12 for free board, for channels and other control  
13 structures -- these are designed to pass safely  
14 the probable maximum precipitation event for this  
15 region.

16 On mine stability the criteria we  
17 used were set with the Ministry of Northern  
18 Development and Mines, and it included, of course,  
19 capping of openings, and addressing all subsidence  
20 issues. There has been also some recent work done  
21 with them.

22 On environment criteria, basically  
23 we used both provincial and federal effluent  
24 regulations to set performance requirements for  
25 the treatment systems. The land was restored to

1 minimize environmental impacts, that's for  
2 erosion, radiation and revegetation criteria.  
3 Really these measures are all aimed to protect  
4 public health, welfare and the environment.  
5 Ultimately, we hope to allow restoration to the  
6 surrounding conditions around the land.

7 On environmental effects  
8 monitoring, here we should have an overhead and  
9 the overhead will show you the -- it's not all  
10 that clear. I apologize, we meant to have a  
11 handout for you.

12 It's not very clear, but it shows  
13 that we do have monitoring throughout the basin  
14 and it includes reference stations at the top-left  
15 of the diagram and stations below each of the main  
16 discharge points, at the discharge points or  
17 control points, and downstream of them, all the  
18 way down to the base of the watershed.

19 It's quite a big program. We have  
20 lots of good data. It includes, of course, water  
21 quality, sediment quality, benthic community, fish  
22 health, radiation and metal dose. The program was  
23 designed in 1998. In our design decisions we  
24 pulled together historical data and this  
25 Environmental Effects Monitoring Program was

1 approved in 1998. The first cycle of monitoring  
2 was in 1999.

3 Of course, the program allows us  
4 to measure directly the cumulative environmental  
5 effects and, of course, future monitoring cycles  
6 will continue to improve our understanding.

7 On the environmental assessment  
8 results on health, the worker dose calculations  
9 based on measurements and conservative exposure  
10 times, is about one tenth of the public dose  
11 limit.

12 The second conclusion is the  
13 predicted risk to the public for radiological  
14 doses at the critical receptor, which is at Nordic  
15 Lake -- this is someone eating the fish, drinking  
16 the water and living nearby -- resulted in an  
17 incremental dose of about one twentieth of the  
18 public criteria.

19 Lastly, the water quality results  
20 in the nearest downstream lakes to meet  
21 health-related Ontario drinking water guidelines.

22 On the environmental assessment  
23 results, we conclude that water quality in the  
24 Serpent River drainage basin is not significantly  
25 impacted. There is minimal risk to aquatic and

1 terrestrial ecology. The results have shown us  
2 really it's difficult to see differences between  
3 the upstream and downstream locations when we  
4 examine the data, and we are encouraged by that.

5 On public consultation, this is  
6 really a normal requirement and a normal operating  
7 practice of the company and how we operate. Rio  
8 Algom has conducted public consultation and  
9 information sessions in preparing for this licence  
10 application that began in 1998.

11 So it feels a little bit a long  
12 time coming perhaps, but the consultation included  
13 regular tours and information sessions, and, of  
14 course, direct communication with municipalities,  
15 First Nation, environmental, economic and citizen  
16 groups.

17 In addition to informal ways, we  
18 tried to introduce a more structured stakeholder  
19 input by creating a Decommissioning Review and  
20 Advisory Committee. This is the first bullet,  
21 sponsoring a stakeholder committee, that I am  
22 referring to. This group was struck to help us be  
23 sure that we really identified the key issues and  
24 addressed them in our submissions. Many of the  
25 issues, as we know, related to the long-term



1 management of closed mines. This committee met  
2 for a period of two years.

3 Of course, our submissions have  
4 been distributed to the municipal offices, the  
5 First Nation and civic offices, and copies sent to  
6 the Elliot Lake Library. The screening report  
7 does have documents containing the results of that  
8 input.

9 In conclusion, I would just say,  
10 based on the reclamation work that we completed to  
11 approve designs, and rigorous designs, based on  
12 earlier work done for Stanleigh, Quirke and Panel,  
13 the sites are safe for casual public access. The  
14 environmental effects monitoring demonstrated  
15 minimal risk to aquatic and terrestrial  
16 environment.

17 We do request approval of the  
18 Environmental Assessment Screening Report and the  
19 Application for Radioactive Waste Facility  
20 Operating Licences.

21 I think all of the sites, of  
22 course, have been closed for more than 30 years.  
23 They have been under the active care and  
24 maintenance of the company for that time. The  
25 design criteria and the approach that we applied

1 to these sites that closed more than 30 years ago,  
2 we use the same criteria that we would use for our  
3 current sites.

4 Thank you.

5 THE CHAIRPERSON: Thank you very  
6 much for the presentation.

7 Now, rather than opening questions  
8 at this point, I would like to turn to the CNSC  
9 staff for their presentation, and then I will open  
10 the floor to both applicant and CNSC staff  
11 questioning at that time.

12 So I will turn to the oral  
13 presentation by CNSC staff as outlined in CMD  
14 document 02-H10 and turn to the Director General.

15

16 **02-H10**

17 **Oral presentation by CNSC staff**

18 MS MALONEY: Thank you, Madam  
19 Chairman. I am Cait Maloney, Director General of  
20 the Directorate of Nuclear Cycle and Facilities  
21 Regulation.

22 With me are Richard Ferch,  
23 Director of the Wastes and Geosciences Division,  
24 and Chris Clement, Project Officer of the Uranium  
25 Mines and Lands Evaluation Division.

1                   Mr. Clement will make a brief  
2 presentation and then we and other CNSC staff are  
3 ready to answer any questions you have on this  
4 matter.

5                   MR. CLEMENT: Thank you. Good  
6 afternoon, Madam President, Members of the  
7 Commission.

8                   My name is Chris Clement, Project  
9 Officer in the Uranium Mines and Lands Evaluation  
10 Division.

11                  As you have heard from Rio Algom  
12 Limited, the subject of this Commission Member  
13 Document is an application for a radioactive waste  
14 facility operating licence for five uranium  
15 tailings management sites in the area of Elliot  
16 Lake, Ontario. These sites are associated with  
17 uranium mines that were in operation at various  
18 times between 1955 and 1968. These were the  
19 Spanish-American mine, the Milliken mine, the  
20 Lacnor mine, the Nordic mine, the Buckles mine and  
21 the Pronto mine.

22                  These sites are five of 11  
23 unlicensed uranium mine tailings management sites  
24 that were the subject of CMD 01-M77 presented to  
25 the Commission in December 2001.

1                   Following the December 2001  
2 meeting, the Commission granted temporary  
3 exemptions from licensing until December 31, 2002  
4 for the five sites that are the subject of the  
5 current application, to allow time to complete the  
6 licensing process that is the subject of this  
7 hearing.

8                   The activity to be licensed is the  
9 operation of a radioactive waste facility. This  
10 includes the possession, storage and management of  
11 nuclear substances currently located within the  
12 existing facility. Management consists of routine  
13 site inspection and maintenance, environmental  
14 monitoring and the treatment of effluent water.

15                   No new construction is proposed,  
16 nor would any new nuclear substances be brought to  
17 the facility.

18                   Rio Algom Limited has applied for  
19 a radioactive waste facility operating licence.  
20 The facility in question meets the definition of a  
21 Class 1B nuclear facility due to the resident  
22 inventory of nuclear substances, and a waste  
23 facility operating licence is the most appropriate  
24 class of licence for the activities to be  
25 authorized at this facility.

1                   Again, that is the possession,  
2                   storage and management of waste nuclear  
3                   substances.

4                   CNSC staff recommends that a  
5                   licence of indefinite term period be issued. A  
6                   licence of indefinite period would be consistent  
7                   with other similar licences issued at sites in  
8                   Elliot Lake and at a similar site in Bancroft,  
9                   Ontario.

10                  In addition, this is appropriate  
11                  given the long-term essentially static nature of  
12                  the facility. The applicant and CNSC staff have  
13                  many years of experience with this facility, and  
14                  the potential hazards are well characterized.

15                  There are measures in place to  
16                  protect the environment and health and safety of  
17                  persons, and the applicant has a good record of  
18                  safety performance.

19                  With respect to the applicant's  
20                  safety performance, CNSC staff is in a position to  
21                  provide a more up to date report than that  
22                  provided in the written submission. In the  
23                  written submission CNSC staff indicated that Rio  
24                  Algom had reported zero medical aid required and  
25                  zero lost-time injuries for the years 1998 to

1           2000.

2                           In 2001, the applicant reports one  
3           medical aid and one lost-time injury. Both were  
4           for the same minor injury and resulted in a total  
5           of one day of lost time.

6                           The opinion of CNSC staff that the  
7           applicant has a good safety record is unchanged.

8                           Should the Commission issue a  
9           licence, CNSC staff will present a status report  
10          to the Commission on the performance of this  
11          facility in two years.

12                          As explained in more detail in the  
13          written submission, CNSC staff has reviewed the  
14          applicant's licence application and is satisfied  
15          that it meets the requirements set out in the  
16          General Nuclear Safety and Control Regulations and  
17          in the Class I Nuclear Facilities Regulations.

18                          CNSC staff is also satisfied that  
19          the applicant meets the requirements set out in  
20          section 24(4) of the Nuclear Safety and Control  
21          Act; that is, the applicant is qualified to carry  
22          on the activities that the licence will authorize  
23          and will, in carrying on those activities, make  
24          adequate provision for the protection of the  
25          environment, the health and safety of persons, and

1 the maintenance of national security and measures  
2 required to implement international obligations to  
3 which Canada has agreed.

4 The Canadian Environmental  
5 Assessment Act requires that an environmental  
6 assessment be carried out before the Commission  
7 may issue the proposed radioactive waste facility  
8 operating licence.

9 CNSC determined that a screening  
10 environmental assessment would be required and  
11 established and managed an environmental  
12 assessment process for this purpose. The  
13 resulting environmental assessment screening  
14 report is attached to the written submission filed  
15 with the Commission.

16 As documented in the screening  
17 report, CNSC staff concludes that the operation of  
18 the facility is not likely to cause significant  
19 adverse environmental effects, taking into account  
20 the implementation of appropriate mitigation  
21 measures.

22 CNSC staff also concludes that  
23 public concern expressed during the preparation  
24 and review of the screening report does not  
25 warrant referral to a mediator or review panel, as

1 the public concerns raised to date have been  
2 adequately handled as part of the environmental  
3 assessment and licensing process.

4 Therefore, CNSC staff recommends  
5 that the Commission conclude that the activities  
6 to be licensed are not likely to cause significant  
7 adverse environmental effects and, pursuant to  
8 paragraph 20(1)(a) of the Canadian Environmental  
9 Assessment Act, proceed to a decision on the  
10 licence application.

11 CNSC staff also recommends that  
12 the Commission issue, pursuant to section 24 of  
13 the Nuclear Safety and Control Act, the proposed  
14 radioactive waste facility operating licence  
15 WFOL-W5-3101.00 for an indefinite period.

16 Thank you.

17 THE CHAIRPERSON: Thank you very  
18 much for that presentation.

19 The floor is now open for  
20 questions to the applicant and to CNSC staff from  
21 the Commission Members.

22 Mr. Graham.

23 MEMBER GRAHAM: I have a couple of  
24 questions of a general nature first.

25 In the overview it was said that



1           there is approximately 168 million tonnes of  
2           uranium tailings in the Elliot Lake area. This  
3           licence really only takes into account about 17  
4           million tonnes. I believe that is what I have  
5           read.

6                           All the other 151 million,  
7           whatever it is, that is under separate licence at  
8           this time?

9                           This is to CNSC staff.

10                          DR. FERCH: Yes, all of that other  
11           material is under licence either to the same  
12           applicant or to Dennison Mines Limited. I think  
13           there are a total of five other mine licences in  
14           the area.

15                          MEMBER GRAHAM: A question to the  
16           applicant.

17                          Do you have any operating uranium  
18           mines in Canada now? Are you operating any active  
19           operations?

20                          MS WIBER: No, we have no  
21           operating uranium mines. We have a joint venture  
22           with Hila Valley Copper. It is an open-pit copper  
23           mine. We do have interests in other mines, but  
24           that would be the closest to an operating  
25           situation that we have.

1                   MEMBER GRAHAM:  Where is that  
2                   located?

3                   MS WIBER:  That is located in  
4                   British Columbia.

5                   MEMBER GRAHAM:  You have given us  
6                   an overview, and a lot of the work has been done.  
7                   The reclamation, and so on, has been done over the  
8                   last number of years.

9                   My question is:  Roughly what type  
10                  of budget do you look at for on-site maintenance  
11                  each year for the monitoring of surface water, and  
12                  all these things?

13                  MS WIBER:  Art Coggan is the  
14                  fellow who controls the budget.  He has told me  
15                  that it is about \$1 million for the closed mines.  
16                  Then there is another budget, of course, for the  
17                  Quirk and Panel sites.  That is another one and a  
18                  half.

19                  So the total is \$2.5 million for  
20                  all of the sites.

21                  MEMBER GRAHAM:  You are budgeting  
22                  about \$2.5 million dollars in your corporation for  
23                  ongoing maintenance and care.  Is that what you  
24                  are saying?

25                  MS WIBER:  Probably I should not

1 mix up all the sites. But yes, that is about  
2 correct.

3 MEMBER GRAHAM: The monitoring of  
4 water quality, fish health, all of those things,  
5 who does that? Do you have a special team doing  
6 that? How much staff is devoted to that type of  
7 work at Elliot Lake?

8 MS WIBER: That work is done by  
9 expert consultants. The last cycle of work was  
10 done by a fisheries biologist. The two companies  
11 together, Beak and Minno(ph), were the two  
12 consulting companies involved in that work.

13 MEMBER GRAHAM: The Pronto  
14 tailings management area was expected to be  
15 completed, I believe, in the winter of 2002, which  
16 has just gone by. Has that been finished?

17 MS WIBER: Yes. Do you want some  
18 details?

19 MR. COGGAN: Yes, the work was  
20 completed this past winter. It is necessary to do  
21 it during the winter while the tailings are  
22 frozen.

23 The only thing remaining to be  
24 done is to seed it as soon as it is dry enough and  
25 the snow has passed.

1                   MEMBER GRAHAM: My question then  
2 is: All of the remediation work has been done on  
3 all of these sites that you are applying for. The  
4 thing now is maintenance and care and monitoring.

5                   Am I correct?

6                   MR. COGGAN: That is correct.  
7 They are all fully remediated. Accordingly, it is  
8 anticipated that the annual ongoing costs will  
9 decrease because it is down now to routine  
10 operation of the effluent treatment plants and  
11 environmental monitoring.

12                   MEMBER GRAHAM: A question to CNSC  
13 staff.

14                   This whole new process involves  
15 more staff, more work for CNSC, I believe, in  
16 monitoring and so on. Have you got the staff now  
17 to continue doing this under these new licence  
18 applications?

19                   MS MALONEY: If you are offering  
20 more staff, sir --

21                   MEMBER GRAHAM: No, I am not  
22 offering.

23                   MS MALONEY: There obviously is  
24 some inspection work and assessment work  
25 associated with this. However, staff has been

1           doing quite a bit of work in this area because the  
2           Serpent River Basin is affected by licence  
3           activities already. So the increase can be  
4           absorbed into my meagre resources.

5                           MEMBER GRAHAM: You got the point  
6           across, regardless.

7                           I have no more questions, Madam  
8           Chair.

9                           THE CHAIRPERSON: It is one of  
10          those days.

11                          Dr. Giroux.

12                          MEMBER GIROUX: I have a few  
13          questions also. The first one is to Rio Algom.

14                          In the design of the dams you  
15          mentioned that you took care of the earthquake  
16          possibility and the maximum precipitation.

17                          What is the maximum precipitation  
18          that you have used, and what is the return  
19          frequency of what will happen?

20                          MR. KNAPP: I think the maximum  
21          probable precipitation is 42 centimetres, which is  
22          about 16.7 inches for those who think the other  
23          way.

24                          That really does not have a return  
25          period. But people often do put a return period

1 on it, and it is about a one in 10,000 return.

2 MEMBER GIROUX: Do the dams have  
3 enough freeboard to absorb that?

4 MR. KNAPP: The spillways were  
5 sized to allow them not to overtop under that  
6 condition.

7 MEMBER GIROUX: Thank you.

8 My other question also to Rio  
9 Algom is about the frequency of inspections. I  
10 will explain my concern.

11 There is a table in the  
12 environmental assessment detailing the frequency  
13 of different inspections. It goes from once a  
14 year, I think, to once a day.

15 Will there be a presence by  
16 somebody readily or every week on the sites who  
17 could detect any major accidents?

18 Your dams are well designed, as  
19 you have said, but if you have a breach in a dam  
20 then you can have a major failure and a major  
21 spill occurring very rapidly. Is there someone  
22 who could pick it up quickly? Whether you are  
23 able to mitigate it or not, I don't know.

24 Could you answer what is the  
25 frequency of presence, intelligent presence on the

1 site to detect any malfunctions?

2 MR. COGGAN: Yes. We have quite a  
3 comprehensive inspection program. It is detailed  
4 in writing in our operating procedures. It ranges  
5 anywhere from daily at those properties that have  
6 effluent treatment plants to weekly for those  
7 sites that don't have effluent treatment plants.

8 In addition to that, we have a  
9 written comprehensive facility inspection on a  
10 monthly basis, employing a checklist identifying  
11 those things that should be carefully recorded.  
12 There is a permanent record kept of that.

13 The last stage of inspection is an  
14 annual inspection by Golder Associates, the  
15 designers of the properties.

16 In addition to this, we have a  
17 written policy that requires an immediate  
18 inspection in the event of some significant event.  
19 I don't remember the exact figure off the top of  
20 my head, but basically the two things that would  
21 trigger it is any earthquake that was felt; and  
22 secondly, a precipitation event.

23 I don't remember the figure, but  
24 it is substantially below the predicted maximum  
25 precipitation event. A significant rainfall

1       precipitates a requirement for immediate  
2       inspection.

3                       Those are really the two things  
4       that affect earth-filled dams: either significant  
5       precipitation events or an earthquake.

6                       MEMBER GIROUX: Thank you.

7                       I have a question for staff.  
8       There is a reference in the written documentation  
9       we had from Rio Algom that they have a number of  
10      management standards -- I think the number is  
11      21 -- that are your guide to monitor and manage  
12      everything.

13                      Has staff seen these and validated  
14      these? Are you satisfied that these are  
15      satisfactory?

16                      MR. CLEMENT: Perhaps you could  
17      clarify which management standards you are  
18      referring to. It is not entirely clear, to me  
19      anyway.

20                      MEMBER GIROUX: I should find the  
21      reference.

22                      MS WIBER: Dr. Giroux, maybe I  
23      should clarify my meaning or what I was speaking  
24      about.

25                      The company, BHP Billiton, and



1 previous to that Rio Algom Limited, had for itself  
2 company standards. These are management standards  
3 that follow the requirements of ISO 14001.

4 A number of years ago both us and,  
5 by coincidence, the new company BHP Billiton  
6 decided to formulate management standards for  
7 health, safety, environment and community. This  
8 presents a comprehensive list of standards, not  
9 just for environment, but also on health, safety  
10 and environment and community.

11 It requires all operations and  
12 sites to have a management standard for this area.  
13 This management standard must be incorporated and  
14 integrated with how they run the business.

15 That is true for all stages of the  
16 mining cycle, including closed mines.

17 Ken Black, for example, is  
18 responsible to be sure that he does a  
19 self-assessment of the closed mines against the  
20 company standard, and he is going to be tracked  
21 against performance on each element.

22 There are 21, and please don't ask  
23 me to recite all 21.

24 I have copies that I can leave  
25 with the Commission.

1                   MEMBER GIROUX:  Would staff have  
2                   received copies of these standards?

3                   MS WIBER:  These are really  
4                   voluntary standards.  All of the work procedures,  
5                   all of the criteria and our own policies in  
6                   setting out the way we approach the design, the  
7                   way we do our public consultation, all of these  
8                   are consistent with the management standards of  
9                   the overall company.

10                   These are sort of fitting  
11                   underneath the more general management.  It is  
12                   like a series of statements of management intent  
13                   around these areas.

14                   MEMBER GIROUX:  They are part of  
15                   your quality assurance program.

16                   MS WIBER:  That is right, for the  
17                   company.

18                   MEMBER GIROUX:  Usually staff  
19                   looks at these if they are relevant to the  
20                   application.  That was the point of my question.

21                   MR. CLEMENT:  Perhaps I could find  
22                   some additional information.

23                   We have not reviewed all 21 of  
24                   their management standards as described.  What we  
25                   have reviewed is the information provided in the

1 application, which includes the general program  
2 document for the Elliot Lake management of all the  
3 Elliot Lake sites. It includes much of the same  
4 general overall information on how the program is  
5 to be laid out, how the plans will be operated,  
6 how the sites will be operated.

7 We have not read all of those  
8 standards, but we have read other high level  
9 documents that relate directly to this facility.

10 MEMBER GIROUX: Thank you.

11 My final question is again to Rio  
12 Algom. I would like to hear a little bit more  
13 about your public consultation program.

14 What is the population that you  
15 are concerned about? How many of these people do  
16 you reach with your program? What is the  
17 frequency of activities that you conduct?

18 MS WIBER: Any one of us could try  
19 that. I feel that I am a hog a little bit. I  
20 will give it a go, and then others can perhaps  
21 fill in for me.

22 There is a population of about  
23 12,000 people in the Elliot Lake area. The idea  
24 behind the consultation, of course, is a number of  
25 purposes, but really it is to be sure that we

1 understand the local issues and to be sure that  
2 there is an opportunity for them to understand  
3 what we are doing.

4 Obviously, this has a big impact  
5 on their own environment. They need assurance  
6 that what is being proposed is a good plan.

7 I think, also, they need an  
8 opportunity to understand how the company is  
9 regulated and is the government also doing its  
10 job.

11 So our intent is to be sure that  
12 the information is available to people; that we in  
13 turn understand their issues around those  
14 applications and that we somehow address them in  
15 some way. It would be our intent to continue  
16 access to information.

17 The way that we went about it was  
18 in different ways: informal ways and, as I  
19 mentioned, we tried a little more formal ways as  
20 well. This was what I referred to the DRAC  
21 committee. It is the Decommission Review and  
22 Advisory Committee that was self-named by the  
23 committee.

24 We went through quite a rigorous  
25 process to select individuals, using a third

1 party. An excellent committee was struck, and  
2 they really worked hard and were very earnest.  
3 They took their responsibilities very seriously.

4 At the end, though, they decided  
5 to disband. They decided it was not appropriate  
6 any more. We had been together about two years.  
7 We were presenting information as we went. We  
8 were explaining the process for licensing.

9 I think they felt it wasn't the  
10 right perspective for them. They felt that the  
11 company was too much a sponsor; that they were  
12 compromised by that closeness to the company and  
13 that they would lose credibility by being so  
14 closely sponsored by the company.

15 Naturally, we were a bit sad, but  
16 that is understandable.

17 Some of the same members have now  
18 come together under what they call the SEC. The  
19 Screening Environment Committee is the name. This  
20 committee includes representation from the  
21 Township of North Shore, of the Serpent River  
22 First Nation and Elliot Lake, and they are an  
23 advisory body to the councils of each of those  
24 communities.

25 I was really delighted to see that

1           this group formed. Some of the members were from  
2           DRAC. I think they took the initiative and they  
3           have gone ahead with that.

4                         I look forward to being able to  
5           present to that group going forward.

6                         MEMBER GIROUX: Thank you. I am  
7           going to be a bit more specific.

8                         In your written brief you  
9           mentioned that your program includes public  
10          forums, site tours, pamphlets.

11                        MS WIBER: Yes.

12                        MEMBER GIROUX: Could you give me  
13          an example of one or two forums in which you had  
14          people. How many people would attend out of the  
15          12,000?

16                        MR. COGGAN: The public tours  
17          which we conducted for two years during the active  
18          decommissioning phase were very well attended. I  
19          think we ran one summer weekly, and we would get  
20          from 20 to 30 people a week. It tapered off  
21          somewhat near the end, and we began getting  
22          repeats. Everything was done and there wasn't  
23          much to see.

24                        We have not continued that for  
25          2002, because pretty well everybody in town that

1 wanted to see it had seen it once or twice  
2 already.

3 As far as public forums regarding  
4 the decommissioning, they were disappointing. We  
5 would advertise them significantly in advance in  
6 the paper and so on, and I must say we got  
7 disappointing turnouts, probably from 20 to 50  
8 people sort of thing.

9 There was a general lack of  
10 interest. I believe that was because there was a  
11 general lack of concern. Rio Algom has operated  
12 in the Elliot Lake area for 40-plus years. We  
13 have a good record. Many of the people had work  
14 for Rio Algom or for Dennison, and basically it  
15 was old news, I think is the main thing.

16 MEMBER GIROUX: Thank you.

17 I would like a final verification  
18 with staff concerning the timeline on this.

19 You mentioned that there was an  
20 application, I think, in 1995 for a prescribed  
21 substance licence. But that licence was never  
22 granted, I think. Is that correct?

23 It evolved with the new act into  
24 the environmental assessment and the situation we  
25 have now?

1 DR. FERCH: Yes, that is correct.  
2 The first step after the licence application was  
3 the preparation of the environmental assessment.  
4 By the time that was essentially completed the new  
5 act, the NSC Act, had been passed by Parliament,  
6 although not yet put into effect.

7 As you can see from the type of  
8 licence that has been applied for now, the  
9 requirements changed between the old act and the  
10 new act. So staff felt at that time that it  
11 probably would be better to complete the  
12 application under the new act, using the new  
13 requirements.

14 I guess we anticipated that the  
15 transition between passing the act and putting it  
16 into effect would be shorter than it was;  
17 otherwise, we might have decided differently. In  
18 any case, that is what we did.

19 MEMBER GIROUX: Thank you.

20 THE CHAIRPERSON: Dr. Barnes.

21 MEMBER BARNES: I have just a few  
22 more further questions, if I may.

23 The monitoring program that you  
24 have outlined, I want to give it another quick  
25 review. How long would it continue for? How long



1 is Rio Algom committed to maintaining the  
2 monitoring program?

3 MR. COGGAN: We don't have an  
4 ending timetable for it. Currently, we have an  
5 environmental monitoring program for the entire  
6 Serpent River Basin from the headwaters of the  
7 Serpent River, which is upstream of the mines,  
8 right down to the discharge of the Serpent River  
9 into Lake Huron. There are no plans to stop that.

10 The design document which was  
11 approved by the joint review group in 1998  
12 incorporated into the design a review of the  
13 findings of the program every five years and  
14 possible modifications every five years.

15 Based on the intensive monitoring  
16 program of water, benthos, sediments and fish  
17 every five years, and the findings of those would  
18 be interpreted, and based on those findings it  
19 would be determined what the ongoing program  
20 should be for the following five years.

21 One could assume that at some  
22 point in time the water will have essentially  
23 reached background conditions, and it possibly  
24 could be discontinued at that time. There is no  
25 ending timetable for the monitoring at this time.

1                   MEMBER BARNES: Is this a decision  
2 by Rio, or is this a decision that would be under  
3 the licensing agreement?

4                   MR. BLACK: This is a decision  
5 made by Rio to continue the program on that  
6 five-year cycle. It is something that we need to  
7 work with the agencies on in terms of structuring  
8 the program. That has been agreed upon.

9                   MR. CLEMENTS: Perhaps I could add  
10 something there.

11                   The monitoring program referred to  
12 in the proposed licence does have no ending date.  
13 Therefore, any change or cessation or reduction in  
14 monitoring would require modifications to the  
15 licence or the documents referenced in the  
16 licence.

17                   So it is a legal requirement to  
18 continue this monitoring until that legal  
19 requirement is changed.

20                   MEMBER BARNES: That is what I was  
21 looking for; thank you. That is very different  
22 from Rio's answer, I think.

23                   MS WIBER: I think there was a  
24 mishearing.

25                   MEMBER BARNES: I would like to

1 look for development of long-term time series in  
2 environmental aspects; that you really do have a  
3 feel for this. We can learn as a nation on not  
4 only this specific one but in other situations.  
5 Since this is a public process, that is captured  
6 in the public databases and has a lot more value  
7 than it is just to Rio Algom.

8 At looking at sampling times, as  
9 Dr. Giroux noted, it varies from daily to weekly  
10 to monthly to half-yearly, and so on. Could  
11 someone on the staff or Rio tell me: Have we  
12 over-engineered the sampling program at this  
13 stage?

14 Perhaps Dr. Thompson might  
15 respond.

16 We have a sampling program that  
17 you say is costing \$2.5 million a year, so it is  
18 not an inconsequential amount. Are we in a sense  
19 over-engineered at this stage just to make sure  
20 that it would be important in the long term to  
21 have datasets that are in fact internally  
22 consistent or to develop the appropriate for  
23 long-term time series?

24 DR. THOMPSON: Good afternoon.  
25 For the record, my name is Patsy Thompson.

1                   The monitoring programs that are  
2                   in place that are referred to in the licence --  
3                   essentially, there are four types of programs.

4                   One is the Serpent River Watershed  
5                   Monitoring Program, which is the equivalent of the  
6                   environmental effects monitoring programs that we  
7                   have at operational mines. That program was  
8                   designed essentially to provide information on the  
9                   status of the environment over a long time period.  
10                  That one is designed to have the biological  
11                  monitoring on a five-year frequency, recognizing  
12                  that the stage at which the facility is, changes  
13                  will be slow and that frequency of monitoring  
14                  would be sufficient to essentially have  
15                  surveillance on the evolution of the receiving  
16                  environment.

17                  In terms of the programs that have  
18                  frequent monitoring, essentially that is intended  
19                  to have a control on the process. For example,  
20                  the effluent treatment plants have to be monitored  
21                  on a more frequent basis to make sure that they  
22                  are operating as designed and essentially stay  
23                  below the action levels and not have effects on  
24                  the environment.

25                  The monitoring schedules have been

1 adjusted to the intent of the program, either for  
2 operational surveillance or for long-term  
3 surveillance of the environment.

4 MEMBER BARNES: Did Rio want to  
5 comment?

6 MR. McKEE: Paul McKee. I would  
7 add to Patsy's comment by saying that the  
8 environmental effects monitoring program component  
9 that is proposed on a five-year basis is probably  
10 much more intensive than we typically see at  
11 closed mine sites. I think it sets a very good  
12 standard.

13 I think the level of effort is  
14 appropriate, as Patsy mentioned, to track changes  
15 over the long term. That is just a comment.

16 MEMBER BARNES: Could I come back  
17 to Dr. Thompson.

18 Could you guesstimate or estimate  
19 how long you think some of these monitoring  
20 programs might continue? I know there are  
21 different settings here.

22 DR. THOMPSON: At this stage it  
23 would be difficult to predict how long, for  
24 example, the Serpent River Watershed Monitoring  
25 Program would need to be continued for.

1                   The behaviour of the remediated  
2 sites will vary. For example, there has been a  
3 program in place at Beaver Lodge where the  
4 situation has been monitored for the last 20  
5 years, and we haven't seen the situation  
6 stabilize.

7                   This does not seem to be the case  
8 at Elliot Lake where there has been the stability  
9 and the quality of water coming out of the  
10 tailings and also some stability in the  
11 concentrations, for example, in sediment and the  
12 benthic invertebrate community.

13                   There had been quite extensive  
14 sediment and benthic vertebrate survey done in, I  
15 think, 1993. The situation that we see in 1999  
16 from the first cycle of results indicates that the  
17 situation has not degraded and there is some  
18 stability.

19                   So we anticipate that probably  
20 with another two or three cycles we will be in a  
21 better position to essentially determine whether  
22 some parts of the monitoring program can be cut  
23 back or done without. But for now, it would be a  
24 bit premature to do that.

25                   MEMBER BARNES: This comes back to

1 the term of the licence that staff has  
2 recommended, which is essentially indefinite with  
3 a two-year review, as opposed to a two-year review  
4 and then every so many years after that.

5 Would you anticipate that an  
6 immediate two-year review and then a periodic  
7 five-year review would be appropriate?

8 MS MALONEY: That was certainly  
9 our intention, that we would probably move to  
10 first a two-year review and then one three years  
11 after that, which would give us the five-year  
12 cycle, and then move on to five years after that.

13 MEMBER BARNES: Given that we are  
14 talking about two specific things here, one being  
15 a long-term monitoring, and a number of tailings  
16 ponds that need to be flooded, has Rio given any  
17 concern to long-term climate change, which of  
18 course is predicted -- and we may have seen it  
19 this week in Toronto.

20 I am sure Environment Canada can  
21 give you a guesstimate for this particular region.  
22 But if you reduced the rainfall for this area for  
23 a decade or so, would this lower the water levels  
24 in those lakes to create any significant problem?

25 MS WIBER: Maybe I will give a

1       general answer, and then we can get more details  
2       if you need it.

3                       We did look at the impact of  
4       extended drought in all of our water cover sites  
5       because that is a risk. We did identify also  
6       areas, for example -- we might need more detail if  
7       I am going to start giving examples.

8                       In the Quirk site, for example, we  
9       think this is a site that requires special  
10      attention. The watershed is quite limited there.  
11      We do have the ability to draw in a larger  
12      watershed if we need to maintain the water cover.

13                      So we did look at that severe  
14      extended drought. In fact, we have been in a very  
15      dry period year over year. I think the last  
16      30-year period has been quite dry.

17                      The Panel site in the assessment  
18      for Panel -- and this is off topic really  
19      vis-à-vis the other sites. My memory is that this  
20      site was really not vulnerable to that issue. It  
21      was quite stable because of the rock, the nature  
22      of the basin. We are limited in the seepage flows  
23      there. So that was very stable and not at risk.

24                      I believe Spanish-American would  
25      be similarly not at risk.



1                   So each of the sites were examined  
2                   in terms of what would be the impact of a severe  
3                   drought perhaps from climate change or just the  
4                   normal extreme variation.

5                   Is this answering your question?

6                   MEMBER BARNES: Yes. You also  
7                   said in one of your last overheads that  
8                   essentially the sites were safe for casual public  
9                   access.

10                  Do you have control on buildings,  
11                  either permanent or cottages in this whole  
12                  watershed area, in the event there was more than  
13                  casual access by individuals?

14                  MS WIBER: Art can go into detail,  
15                  but I will give you again a general answer.

16                  The properties that we are holding  
17                  under licence and the land that we have identified  
18                  needed for long-term care and maintenance are  
19                  contained within the licences. We maintain the  
20                  surface rights and the rights that we have to  
21                  those properties.

22                  There will be no construction or  
23                  allowance to build or public use of those lands at  
24                  all. The only lands that would have access to the  
25                  municipality, let's say, for making decisions

1           about housing would be outside the areas that we  
2           have identified that need to be controlled.

3                         So there would be no public access  
4           or long-term use contemplated at all in any of the  
5           areas. We did also identify an area of buffer  
6           zone as well.

7                         THE CHAIRPERSON: I have a  
8           question. The CNSC staff mentioned this issue of  
9           recommending an indefinite licence with a two-year  
10          status report, and then the word "review" was  
11          used, which to me means something quite different  
12          than status report.

13                        I don't think we have the comments  
14          from the applicant on this.

15                        It is not necessary to get into an  
16          exhaustive discussion of this today, but I do  
17          believe that one of the issues that is before the  
18          Commission in all licences now is reporting  
19          requirements, who reports and how we do it,  
20          et cetera.

21                        You may want to clarify this  
22          review versus status report comment. I would ask  
23          that both the applicant and CNSC staff give more  
24          thought to these issues, because it sets quite a  
25          precedent with regard to indefinite licences.

1                   I don't want the Commission to  
2                   take this decision without some significant  
3                   thought being placed to it in terms of burden on  
4                   the applicant as well as the staff for this.

5                   Are there any preliminary  
6                   comments?

7                   MS MALONEY: In using the word  
8                   "review", that was shorthand for review of the  
9                   status rather than a review of the licensing  
10                  decisions.

11                 THE CHAIRPERSON: My other comment  
12                 is very much taken.

13                 Yes, Ms Wiber.

14                 MS WIBER: Just to comment, that  
15                 is how I would look at it, too. We would prepare  
16                 the status report. That would be reviewed by the  
17                 CNSC; and then based on what they see, they would  
18                 make decisions and recommendations for changes,  
19                 either to the monitoring or the long-term care and  
20                 maintenance program, or to other issues.

21                 THE CHAIRPERSON: It may be in Day  
22                 Two that Rio Algom wants to look at the timing of  
23                 these reports in terms of other reports that you  
24                 are doing. For example, in the five-year status  
25                 that you talked about or other reports that you

1           are doing, there may be a schedule that makes more  
2           sense in terms of reporting.

3                       I think that should be taken into  
4           account in any recommendation that you make on Day  
5           Two.

6                       On that basis, that brings us to  
7           the end of the question period for this hearing.

8                       This hearing will continue on the  
9           27th of June, 2002. The public is invited to  
10          participate, either by oral presentation or  
11          written submission, on Hearing Day Two.

12                      Persons who wish to intervene on  
13          that day must file submissions by the 28th of May,  
14          2002. Thus, this hearing is adjourned until June  
15          27th, 2002. Thank you.