

1           **HEARING DAY TWO**

2           **Atomic Energy of Canada Limited:**

3           **Application for a licence to decommission**

4           **Whiteshell Laboratories**

5                           THE CHAIRPERSON: The first item  
6           today is Hearing Day Two on the application by  
7           Atomic Energy of Canada Limited for a licence to  
8           decommission the Whiteshell Laboratories.

9                           MR. MARC LEBLANC: The first day  
10          of the public hearing on this application was held  
11          on September 12, 2002.

12                           The Notice of Public Hearing  
13          2002-H14 was published on July 12, 2002. The  
14          public was invited to participate either by oral  
15          presentation or written submission on Hearing Day  
16          Two.

17                           October 15th was the deadline set  
18          for filing by intervenors, and the Commission  
19          received four requests for intervention.

20                           A submission from Mr. Keith Harvey  
21          was received after the intervenor deadline of  
22          October 15th. A panel of the Commission accepted  
23          the intervention.

24                           A record of decision was published  
25          and appears on our Web site.

1                   It was distributed to Atomic  
2                   Energy of Canada Limited and other intervenors.  
3                   The document is added to the Agenda as  
4                   CMD 02-H19.5.

5                   All Commission Members were  
6                   present for Day 1 of this hearing.

7                   Ms MacLachlan and Dr. Dosman,  
8                   being absent today, will not participate in the  
9                   decision on the matter of an application by Atomic  
10                  Energy of Canada Limited for a licence to  
11                  decommission Whiteshell Laboratories.

12                  Presentations were made on Day 1  
13                  by the applicant, Atomic Energy of Canada Limited,  
14                  under CMD 02-H19.1 and 02-H19.1A and by CNSC staff  
15                  under CMD 02-H19.

16                  It is noted that supplementary  
17                  information has been filed by the applicant and  
18                  the CNSC staff.

19

20                  **02-H19.1B / 02-H19.1C**

21                  **Oral presentation by Atomic Energy of Canada**  
22                  **Limited**

23                  THE CHAIRPERSON: I would like to  
24                  start today's hearing by calling upon Atomic  
25                  Energy of Canada Limited to give their oral

1 presentation, as outlined in CMD documents  
2 02-H19.1B and 02-H19.1C.

3 I will turn it over to the Chief  
4 Operating Officer of AECL nuclear laboratories,  
5 Dr. Fehrenbach.

6 Good morning.

7 DR. FEHRENBACH: Good morning.  
8 Thank you, Madam Chair, Members of the Commission.

9 My name is Paul Fehrenbach, and in  
10 my capacity as Chief Operating Officer for AECL's  
11 nuclear laboratories I am pleased this morning to  
12 introduce the AECL presentation team for this  
13 Day 2 hearing of the Whiteshell Laboratories  
14 decommissioning licence application.

15 I would like the members of the  
16 team to acknowledge themselves when their name is  
17 called, to help you identify them.

18 Since the Day 1 hearing in  
19 September the responsibility for the Whiteshell  
20 site licence has been transferred to Bill  
21 Kupferschmidt, who is the General Manager for  
22 AECL's decommissioning and waste management  
23 organization.

24 Bill will be making the  
25 presentation this morning, summarizing the

1 Whiteshell decommissioning licence application,  
2 and the supplementary information provided to the  
3 Commission in response to the questions and  
4 resulting discussions at the Day 1 hearing.

5 Bill's predecessor Colin Allan is  
6 also present as a member of the delegation.

7 I would also like to introduce  
8 Grant Koroll, the Director for Whiteshell  
9 decommissioning, and his predecessor Bob Helbrect;  
10 Bob McCamis, the Whiteshell Laboratories Nuclear  
11 Facility Authority; and Michael Stephens, who is  
12 the manager of quality assurance for  
13 decommissioning and waste management.

14 The balance of the team includes:  
15 Ray Lambert, who is responsible for the Radiation  
16 Protection, Environmental Protection and Emergency  
17 Preparedness Compliance Programs; Jean-Pierre  
18 Letourneau, AECL's Licensing Single Point of  
19 Contact.

20 Other resource personnel present  
21 include Brad Perrin, who is responsible for  
22 physical security and fire protection; Doug Champ,  
23 senior advisor to the general manager,  
24 decommissioning and waste management; John Chilton  
25 and George Sotirov, AECL licensing managers; and

1 Daniel Grondin, senior licensing specialist.

2 Now I would like to call on Bill  
3 Kupferschmidt to make the AECL presentation in  
4 support of our request for the Whiteshell site  
5 decommissioning licence.

6 MR. KUPFERSCHMIDT: Thank you,  
7 Paul.

8 Madam Chair, Members of the  
9 Commission, at the Day 1 Whiteshell Laboratories  
10 decommissioning licence hearing, AECL made an oral  
11 presentation summarizing our request for a  
12 six-year licence to complete the first phase of  
13 the Whiteshell decommissioning project. That  
14 presentation provided an overview of Whiteshell  
15 Laboratories' operating history, the performance  
16 record over the current licence period, an  
17 overview of the Whiteshell decommissioning  
18 program, and the organizational framework in place  
19 for decommissioning.

20 The detailed licence application  
21 had been previously submitted to CNSC staff in  
22 2002 May.

23 In response to feedback obtained  
24 at the Day 1 hearing, AECL subsequently prepared a  
25 written summary of the original application, with

1 emphasis on topics discussed at the Day 1 hearing,  
2 and provided that summary to Commission Members in  
3 mid-October.

4 My presentation today provides a  
5 more detailed description of the Phase 1 project  
6 workscope to be carried out under the proposed  
7 six-year decommissioning licence and summarizes  
8 the content of the summary document provided to  
9 you in October.

10 In particular, my presentation  
11 will address the following topics:

12 (1) an overview of the Whiteshell  
13 decommissioning program;

14 (2) a description of the Phase 1  
15 decommissioning workscope;

16 (3) the process for managing risks  
17 during decommissioning and the compliance programs  
18 AECL has in place to manage those risks;

19 (4) a summary of the AECL quality  
20 assurance program, emphasizing the pertinent  
21 Whiteshell Laboratories decommissioning elements  
22 of the quality assurance program; and

23 (5) an overview of the  
24 environmental assessment process that was carried  
25 out prior to AECL submitting its request for a

1       decommissioning licence, and the proposed  
2       follow-up program to the environmental assessment.

3               I will conclude my presentation by  
4       summarizing the basis for AECL's application for a  
5       six-year licence to address the various  
6       interconnected and highly integrated activities  
7       needing to be undertaken during Phase 1  
8       decommissioning of the Whiteshell site.

9               This overhead shows an aerial view  
10       of the Whiteshell site on the east bank of the  
11       Winnipeg River.

12               Significant facilities include:  
13       the WR-1 reactor; the building 300 research and  
14       development laboratory; and the building 401  
15       security/site entry.

16               Generally, south side buildings  
17       were devoted to non-nuclear activities. Nuclear  
18       facilities are located on the north side of the  
19       site. The site waste management facilities are  
20       located about one kilometre northeast of the main  
21       laboratory.

22               Site decommissioning is planned to  
23       be conducted in three phases, with the goal for  
24       Whiteshell Laboratories to be a decommissioned  
25       site in 60 years; that is, by about 2060.

1                   The first phase will last about  
2                   six years and focuses on decontamination and  
3                   building modifications to achieve a state of  
4                   storage-with-surveillance.

5                   The second phase, lasting  
6                   approximately ten years, maintains the  
7                   storage-with-surveillance state of decommissioning  
8                   facilities but focuses on waste management  
9                   improvement activities for selected wastes already  
10                  in storage, in particular the recovery of fuel  
11                  wastes stored in standpipes at the waste  
12                  management area, as well as some trenched wastes  
13                  not suitable for in-situ disposal.

14                  Phase 3 covers the last 40 years  
15                  of the program. Initially, this phase is  
16                  continued storage-with-surveillance, followed by  
17                  final decommissioning of facilities and  
18                  infrastructure and removal of most wastes from the  
19                  site.

20                  The Phase 1 decommissioning  
21                  workslope, the work to be covered by the proposed  
22                  decommissioning licence, focuses on  
23                  decontamination and modification of nuclear  
24                  facilities and associated services to place them  
25                  in a secure state of storage-with-surveillance.



1                   This activity is necessary as the  
2                   initial step in decommissioning and must be  
3                   accomplished regardless of the schedule for  
4                   achieving the final end-state for the Whiteshell  
5                   site.

6                   In addition, the Van de Graaff  
7                   accelerator and the Neutron generator will be  
8                   fully decommissioned to a final end-state. The  
9                   WR-1 reactor will also be maintained in the  
10                  storage-with-surveillance state already  
11                  established through decommissioning work completed  
12                  in 1994.

13                  Building heating and ventilation  
14                  associated with WR-1 will also be modified to meet  
15                  requirements for shutting down the district  
16                  heating system.

17                  Non-nuclear infrastructure will  
18                  also undergo verification surveys to confirm that  
19                  there has been no contamination from adjacent  
20                  nuclear operations. Some redundant buildings will  
21                  be removed. For such buildings, site services  
22                  will be removed or terminated; for example, active  
23                  drain lines will be capped.

24                  Once alternate heating systems  
25                  have been installed for buildings remaining in

1 storage-with-surveillance, the site district  
2 heating system will then be shut down.

3 Decommissioning activities  
4 associated with Phase 1, as described in the  
5 previous two overheads, are similar to many of the  
6 maintenance and facility modification activities  
7 conducted during the operating period for  
8 Whiteshell Laboratories. The main difference  
9 between such work carried out as part of normal  
10 site operations versus that undertaken during  
11 decommissioning is that during decommissioning  
12 these activities are the main focus of work, with  
13 the activities becoming more frequent and/or being  
14 of longer duration.

15 Risk management is assured by the  
16 careful planning, safety analysis and review and  
17 approval of decommissioning activities, and the  
18 orderly execution of work under compliance and  
19 quality assurance programs.

20 The same compliance processes that  
21 have long been used to ensure safe activities  
22 during operations remain in place and will  
23 continue to be used to help ensure the safety of  
24 decommissioning work.

25 Work planning includes the

1 preparation of detailed decommissioning plans,  
2 safety analysis report, work plans -- which  
3 include hazard and risk assessments -- and  
4 detailed working procedures.

5 These documents are reviewed by  
6 technical experts, compliance program staff and  
7 facility management and may also be reviewed, as  
8 appropriate, by AECL's Safety Review Committee and  
9 by CNSC staff.

10 It should also be noted that staff  
11 responsible for carrying out the work are involved  
12 at all stages of the document preparation and  
13 review process.

14 During execution of the  
15 decommissioning work, safety and compliance are  
16 assured by appropriate levels of training,  
17 establishment of work controls, use of protective  
18 equipment and maintenance of health surveillance  
19 systems and practices.

20 As well, safety-related  
21 maintenance inspections are conducted and feedback  
22 mechanisms, such as audits, unplanned event  
23 reporting and operational experience programs are  
24 in place.

25 As we move ahead, decommissioning

1 is of growing importance to AECL, to Canada and  
2 internationally. AECL is committed to maintaining  
3 and developing qualified resources, while  
4 benefiting from national and international  
5 expertise, to deliver the Whiteshell  
6 decommissioning program.

7 AECL is committed to conducting  
8 all operations and decommissioning activities in  
9 accordance with established AECL compliance  
10 program.

11 These include environmental  
12 protection, radiation protection, emergency  
13 preparedness and the other compliance programs  
14 shown on this overhead.

15 Reference material for these  
16 programs is identified in the licensing support  
17 document RC-693-WL, Revision 5, supplied to CNSC  
18 staff in 2002 May as part of AECL's application  
19 for a six-year licence for the Whiteshell site, as  
20 well as in the summary document AECL provided to  
21 the Commission this past October.

22 Madam Chair, Members of the  
23 Commission, decommissioning work will be carried  
24 out in accordance with AECL's quality assurance  
25 program.

1                   This overhead shows the hierarchy  
2                   of AECL's company-wide manuals, including the AECL  
3                   management manual, the overall quality assurance  
4                   manual and the eight sub-tier, company-wide  
5                   quality assurance manuals which cover AECL's  
6                   activities in areas such as procurement, design,  
7                   nuclear operations and decommissioning.

8                   These sub-tier quality assurance  
9                   manuals follow the CSA N286 series of QA  
10                  standards, as shown, except for the R&D manual,  
11                  which follows the ISO 9001 standard.

12                  As previously committed by AECL at  
13                  the Day 1 hearing, the AECL company-wide  
14                  decommissioning quality assurance manual has been  
15                  submitted to CNSC staff for their review.

16                  This slide shows the components of  
17                  the AECL quality assurance program most pertinent  
18                  to Whiteshell Laboratories. Under each of the  
19                  quality assurance manuals for nuclear operations  
20                  and decommissioning, there will be a  
21                  Whiteshell-specific quality assurance plan and  
22                  associated quality assurance procedures to  
23                  complete the formal QA framework.

24                  These site-specific quality  
25                  assurance plans and quality assurance procedures

1 are now being prepared. The Whiteshell  
2 Laboratories environmental monitoring group, the  
3 Dosimetry Services group, and the Analytical  
4 Science Branch, all of which will be contributing  
5 to Whiteshell decommissioning, also have their own  
6 quality assurance manuals.

7 This slide illustrates the  
8 organizational structure of AECL's decommissioning  
9 and waste management unit, with areas pertinent to  
10 Whiteshell's decommissioning highlighted in blue.

11 The compliance program authorities  
12 set the requirements for, and monitor compliance  
13 of, decommissioning activities at Whiteshell. The  
14 decommissioning and waste management quality  
15 assurance manager reports to me but also reports  
16 independently to AECL's chief quality officer.

17 The Nuclear Facilities Authority  
18 is responsible for the health and safety of  
19 persons, including staff, contractors and the  
20 public, as well as for the protection of the  
21 environment at all times during decommissioning.

22 The Director of the Whiteshell  
23 decommissioning program is responsible for  
24 executing the decommissioning work.

25 As part of AECL's application for

1 a six-year licence for the Phase 1 decommissioning  
2 of Whiteshell Laboratories, extensive supporting  
3 documentation has been submitted to the CNSC, as  
4 briefly outlined in Section 4 of the summary  
5 document provided to the Commission this past  
6 October.

7 This documentation, in particular  
8 the Whiteshell Laboratories detailed  
9 decommissioning plan, Volume 1, the program  
10 overview, shows that the decommissioning workscope  
11 for Phase 1 is well defined.

12 This latter document has already  
13 been reviewed and accepted by CNSC staff. It  
14 should also be noted that the process for  
15 preparation review and approval of decommissioning  
16 documentation is in place and functioning.

17 As set out in the summary  
18 document, detailed plans sufficient to proceed  
19 with Phase 1 work have already been accepted or  
20 are under review by CNSC staff.

21 Madam Chair, Members of the  
22 Commission, before talking about the environmental  
23 assessment process, I would like to review the  
24 regulatory process leading to the six-year licence  
25 request.

1                   The process commenced in 1999 with  
2                   AECL's formal notification to the former Atomic  
3                   Energy Control Board of the intent to decommission  
4                   the Whiteshell Laboratories. This notification,  
5                   and the associated licensing actions required to  
6                   initiate the project, triggered an environmental  
7                   assessment under the Canadian Environmental  
8                   Assessment Act.

9                   The environmental assessment  
10                  process was completed earlier this year, and this  
11                  has enabled the licence application for Phase 1  
12                  Whiteshell decommissioning to proceed, the subject  
13                  of this hearing.

14                 The environmental assessment was  
15                 conducted at a comprehensive study level and  
16                 covered the defined project scope to a final  
17                 end-state in 60 years.

18                 Two alternative periods of 20 and  
19                 100 years were also assessed and, following due  
20                 consideration of assessment criteria, including  
21                 economic feasibility, technical feasibility and  
22                 public concern, the 60-year time frame was  
23                 selected.

24                 The environmental assessment  
25                 workscape did not include development of disposal



1 facilities or long-term waste management  
2 alternatives.

3 There were two formal reviews of  
4 the comprehensive study report. Revision 1, in  
5 2000 April, resulted in 347 comments and Revision  
6 2, in 2001 March, resulted in 352 comments.  
7 Responses to all comments were documented in  
8 subsequent revisions and in the addendum to the  
9 final report.

10 This overhead shows the review  
11 source and the number of comments from each  
12 source. Revision 1 was circulated for review by  
13 expert panels and the responsible authorities.  
14 Comments were also received from the Local  
15 Government District of Pinawa and were addressed  
16 in the public consultation section of Revision 2.

17 The public was kept informed of  
18 the environmental assessment activities through  
19 public consultation within the regional study  
20 area.

21 The responsible authorities  
22 approved and submitted the comprehensive study  
23 report to the Canadian Environmental Assessment  
24 Agency in 2001 December. The Agency provided  
25 another opportunity for public review and then

1 referred the matter to the Minister of the  
2 Environment in 2002 February for a decision.

3 On 2002 April 02 the Minister of  
4 the Environment announced his decision that "the  
5 Whiteshell decommissioning project is not likely  
6 to cause significant adverse environment effects"  
7 and that "no further environmental assessment by a  
8 review panel or a mediator is warranted".

9 The Minister then referred the  
10 matter back to the responsible authorities for  
11 appropriate action, thus enabling consideration of  
12 AECL's licence application for Whiteshell  
13 decommissioning.

14 As documented in the comprehensive  
15 study report, AECL is committed to a number of  
16 follow-up program activities to ensure that the  
17 decommissioning work and planned mitigation  
18 measures perform as intended.

19 The follow-up program is formally  
20 documented and forms part of the licensing  
21 submission.

22 The key elements of the program  
23 are:

24 (1) maintaining the existing  
25 environmental monitoring program and adapting it,

1 as appropriate, to changing circumstances;

2 (2) establishing non-radiological  
3 air quality monitoring for building demolition  
4 work;

5 (3) evaluating the  
6 fitness-for-service of waste management  
7 facilities;

8 (4) confirming hydrogeological  
9 conditions at the waste management area;

10 (5) implementing enhanced  
11 monitoring for sewage lagoons and inactive  
12 landfill;

13 (6) monitoring Winnipeg River  
14 downstream sediments; and

15 (7) implementing a public  
16 communication program and maintaining it  
17 throughout the follow-up program.

18 AECL is continuing a proactive  
19 approach to maintaining public communications in  
20 the regional study area, consistent with the  
21 approach developed for the environmental  
22 assessment public consultation. Those processes  
23 were designed with the objective of establishing  
24 long-term relationships that would endure beyond  
25 the environmental assessment phase and extend

1 through the decommissioning program.

2 Following from the public  
3 communication contacts established under the  
4 environmental assessment, three main lines of  
5 communication are being pursued as part of the  
6 follow-up program.

7 The first is the continuation and  
8 updating of the established communications  
9 protocol with the Sagkeeng First Nation. Two  
10 meetings were held this past summer and fall.

11 The second activity, initiated by  
12 AECL, is the formation of a public liaison  
13 committee with local municipal governments and  
14 business tenants at Whiteshell Laboratories. The  
15 inaugural meeting of the committee was held this  
16 past August and draft terms of reference for the  
17 public liaison committee were produced.

18 The third initiative consists of  
19 letters to government officials, public interest  
20 groups and associations, informing them of our  
21 activities and providing contact names to  
22 facilitate the exchange of information.

23 AECL will continue to provide  
24 timely briefings to all stakeholders and interest  
25 groups. The decommissioning newsletter, published

1           twice in the region during the environmental  
2           assessment process, will be continued as the Phase  
3           1 decommissioning work is undertaken.

4                         To conclude my presentation, Madam  
5           Chair and Members of the Commission, an  
6           environmental assessment at the comprehensive  
7           study level has been completed for Whiteshell  
8           decommissioning, and the Minister of the  
9           Environment concluded that Whiteshell  
10          decommissioning is not likely to cause significant  
11          environmental effects, and no further  
12          environmental assessment by a review panel or a  
13          mediator is warranted.

14                        Whiteshell decommissioning is  
15          planned to be carried out in three phases.

16                        Today, AECL is requesting your  
17          approval of a six-year decommissioning licence to  
18          cover the duration of the defined scope of work  
19          for Phase 1. We base our request on the following  
20          conclusions.

21                        First, the Phase 1 workscope --  
22          decontamination and dismantling to achieve a safe  
23          state of storage-with-surveillance -- is a  
24          required first step to decommission Whiteshell  
25          Laboratories to final end-state.

1                   Second, the planning  
2                   documentation, compliance programs and the  
3                   organizational structures to manage risk and  
4                   support the safe execution of Phase 1  
5                   decommissioning are in place.

6                   Third, a committed follow-up  
7                   program plan and schedule for the environmental  
8                   monitoring, interim storage and final end-state  
9                   reporting and public communications are in place.

10                   Finally, Whiteshell Laboratories  
11                   has operated safely and in compliance with  
12                   requirements throughout the current licensing  
13                   period and will continue to do so throughout the  
14                   proposed decommissioning licence period.

15                   Madam Chair, Members of the  
16                   Commission, thank you for providing this  
17                   opportunity to address this Commission in a public  
18                   setting.

19                   My colleagues and I will be  
20                   pleased to entertain your questions. Thank you.

21                   THE CHAIRPERSON: Thank you. We  
22                   will now move to the CNSC staff for their  
23                   presentation before opening the floor for  
24                   questions.

25

1           **02-H19.A**

2           **Oral presentation by CNSC Staff**

3                           THE CHAIRPERSON: In that vein, I  
4 will note the presentation by CNSC staff is noted  
5 in CMD document 02-H19.A.

6                           I will turn it over to the  
7 Director General of the Directorate of Nuclear  
8 Cycle and Facilities Regulation, Cait Maloney.

9                           Ms Maloney.

10                          MS MALONEY: Good morning, Madam  
11 Chair, Members of the Commission.

12                          I am Cait Maloney, Director  
13 General of the Directorate of Nuclear Cycle and  
14 Facilities Regulation.

15                          With me today are Barclay Howden,  
16 Director of the Research Facilities Division and  
17 Peter Fundarek, Project Officer for the Whiteshell  
18 site.

19                          At Day 1 of the hearing on  
20 September 12, 2002, CNSC staff presented its  
21 position on the application by AECL to  
22 decommission Whiteshell Laboratories. Since then  
23 CNSC staff has prepared supplemental CMD 09-H19.A  
24 to update Commission Members on a number of  
25 issues.

1                   This presentation will give a  
2                   brief overview of these issues, and CNSC staff  
3                   recommendations on the licence application, which  
4                   remain unchanged from Day 1.

5                   I will now turn the presentation  
6                   over to Mr. Howden.

7                   MR. HOWDEN: Madam Chair, Members  
8                   of the Commission. My name is Barclay Howden.

9                   Our presentation today has six  
10                  sections: Risks Associated with Decommissioning;  
11                  Updates on Licensing Issues; Proposed Licence  
12                  Length; Additional Changes to Licence Conditions;  
13                  Planned CNSC Activities; and Recommendations.

14                  At Day 1 of the hearing there was  
15                  discussion about the risks posed by  
16                  decommissioning. CNSC staff has given a brief  
17                  overview of the generic risks in CMD 02-H19.A.

18                  Although similar to construction  
19                  work in some ways, decommissioning is different in  
20                  the potential hazards that may be faced; thus the  
21                  requirement for thinking through the process,  
22                  detailed planning and, finally, careful execution  
23                  of the work.

24                  For Phase 1, which encompasses the  
25                  application that is currently before the



1 Commission, there is some decommissioning planned,  
2 although much of the work is focused on putting  
3 the site into a safe shutdown state. Thus, the  
4 risks being faced during this phase will be  
5 somewhat less than those during full-scale gutting  
6 and demolition work.

7 Nevertheless, work planning  
8 remains very important, as do the ongoing programs  
9 that need to be in place over the entire life  
10 cycle of this site.

11 As stated in the Day 1 CMD 02-H19,  
12 CNSC staff has concluded that AECL has in place,  
13 or will have in place, programs suitable for  
14 controlling hazards that Phase 1 poses.

15 During the Day 1 hearing,  
16 Commission Members raised a number of questions  
17 and some issues remained open. I would briefly  
18 like to touch on those now.

19 Regarding quality assurance, AECL  
20 submitted its company-wide decommissioning quality  
21 assurance manual on November 7th, and CNSC staff  
22 has started a review of this document.

23 Until that review is completed and  
24 outstanding issues that may be identified are  
25 resolved and the program implemented, CNSC staff

1 has confirmed that working level procedures for  
2 current work activities are in place.

3 Nonetheless, staff continues to  
4 propose a licence condition related to quality  
5 assurance.

6 Regarding training, CMD 02-H19.A  
7 contains additional details on assessments that  
8 CNSC staff performed on Whiteshell's specific  
9 training programs since 1996.

10 Regarding emergency preparedness,  
11 CNSC staff has accepted the current version of  
12 Whiteshell's emergency response plan.

13 Regarding the site security  
14 report, the revised report was delivered on time  
15 and CNSC staff's review is due to be complete on  
16 November 18, 2002.

17 Regarding financial guarantees,  
18 discussions between AECL and CNSC staff on  
19 suitable arrangements for meeting this requirement  
20 continue. Thus, CNSC staff continues to propose a  
21 licence condition to address this issue.

22 Regarding fire protection, the  
23 planned fire audit was completed. Our  
24 consultant's report was delivered today, and we  
25 will address any issues raised through our routine

1 compliance program.

2 AECL expeditiously dealt with one  
3 issue identified that could have had an immediate  
4 potential impact on nuclear safety.

5 On the topic of licence length,  
6 AECL requested a six-year term and CNSC staff  
7 supports this request. Full details are provided  
8 in CMD 02-H19.A.

9 I will touch on the highlights  
10 only.

11 The proposed expiry date coincides  
12 with the completion of a distinct phase, Phase 1  
13 of Whiteshell's decommissioning. Also, the work  
14 being planned during this phase does not preclude  
15 or inhibit potential changes that the applicant  
16 may consider to work planned in future phases.

17 The measures and programs that  
18 AECL has in place for protecting health, safety  
19 and the environment are suitable for controlling  
20 hazards that have been identified.

21 CNSC staff considers that the work  
22 on the decommissioning quality assurance program  
23 is sufficiently advanced that the program will  
24 meet requirements when it is needed.

25 AECL has demonstrated a consistent

1 good record of safety performance and compliance  
2 with regulatory requirements at the Whiteshell  
3 site.

4 CNSC staff is satisfied that the  
5 above trends will continue during Phase 1 of  
6 decommissioning.

7 Since preparing CMD 02-H19.A, CNSC  
8 staff became aware that proposed licence Condition  
9 8.5 required further revision to include a  
10 reference to Attachment 1 of the letter cited in  
11 that condition. This overhead presents Condition  
12 8.5 as it should appear in the proposed licence.

13 Over the past few years operations  
14 at Whiteshell have been relatively steady with the  
15 wind-down of programs. Moving toward  
16 decommissioning activities means that there will  
17 be significant changes occurring at the site.

18 CNSC staff continues to be of the  
19 opinion that AECL has put in place adequate checks  
20 and balances to make sure the decommissioning is  
21 done safely.

22 Nonetheless, if the Commission  
23 approves the proposed licence, CNSC staff plans to  
24 verify AECL's compliance with the licence over the  
25 term of the licence.

1                   In particular, CNSC staff plans to  
2 perform routine inspections of the site, any  
3 required follow-up on findings from the recently  
4 completed fire protection program audit, a  
5 radiation protection audit once decommissioning  
6 commences, a re-evaluation of the site emergency  
7 preparedness program under decommissioning  
8 conditions, a re-evaluation of the site security  
9 program in 2003, and a quality assurance audit  
10 once the new program is implemented.

11                   Additionally, CNSC staff continues  
12 to commit to providing the Commission with a  
13 status report on decommissioning at the mid-point  
14 of the proposed licence term.

15                   CNSC staff recommends that the  
16 Commission issue a nuclear research and test  
17 establishment decommissioning licence for a period  
18 of six years.

19                   I will now pass the floor back to  
20 Ms Maloney.

21                   MS MALONEY: Thank you,  
22 Mr. Howden.

23                   Madam Chair, that concludes  
24 staff's presentation. We are available to respond  
25 to your questions.

1 THE CHAIRPERSON: Thank you very  
2 much.

3 Before we open the floor for  
4 questions, I would like to reiterate, for this  
5 round of questioning and also for the rounds of  
6 questioning involving the intervenors, the purpose  
7 of this hearing. I know for a number of you this  
8 is a new process and I would like to reiterate  
9 that.

10 The licensing hearing currently  
11 before the Commission is limited to the discrete  
12 set of proposed decommissioning activities that  
13 form part of a proposed multi-stage 60-year  
14 decommissioning project. The hearing of the  
15 Commission is only with respect to the proposed  
16 first phase of decommissioning.

17 The Commission will not be making  
18 decisions at this time on the future stages of the  
19 overall decommissioning plan.

20 It is important to understand  
21 exactly the role of the Commission here today.

22 If others wish to have a  
23 clarification, we can come back to that later if  
24 you wish to have that reiterated at a later time  
25 in the questioning period.

1                   With that, I will open the floor  
2                   for questions from the Commission Members.

3                   Mr. Graham.

4                   MEMBER GRAHAM: Thank you.

5                   I have a couple of questions  
6                   around budgets, and so on.

7                   Whiteshell is operating now, and  
8                   it operates with a certain budget. Roughly what  
9                   is your budget that you have there now on a yearly  
10                  basis -- the budget that you have as of today?

11                  DR. FEHRENBACH: Thank you for the  
12                  question. I didn't happen to bring my budget  
13                  portfolio with me, so I am speaking in very round  
14                  numbers.

15                  MEMBER GRAHAM: That is quite all  
16                  right.

17                  DR. FEHRENBACH: I guess the  
18                  budget falls into two separate categories as we  
19                  track it: one for the ongoing operations and one  
20                  for specific decommissioning activities. The two  
21                  are gradually coming together, of course, and with  
22                  the approval of this licence we will make suitable  
23                  bookkeeping modifications.

24                  In answer to your question, I  
25                  would say that the operational budget for

1 Whiteshell today is currently running in the  
2 neighbourhood of \$8 million annually, and there  
3 are some additional decommissioning project  
4 expenses over and above that.

5 MEMBER GRAHAM: Will that  
6 \$8 million be relatively steady over the first  
7 phase of the decommissioning for operations?

8 I am going to come to the  
9 decommissioning part. For the operational budget  
10 will that be fairly static, or not?

11 DR. FEHRENBACH: We anticipate  
12 that the level of activity at the site, whether it  
13 happens to be in our operational category or in  
14 our decommissioning category, will remain fairly  
15 constant over the period of the Phase 1  
16 activities, yes.

17 As I said, in our internal books  
18 the focus will shift from tracking it as  
19 operational expenses to decommissioning expenses.  
20 But the level of activity will remain fairly  
21 constant.

22 MEMBER GRAHAM: My next question  
23 will be, then: Pending this decommissioning being  
24 approved, Phase 1, and you proceed over six  
25 years -- I think we saw it was \$49-some million



1 for Phase 1 decommissioning.

2 How much will your budget have to  
3 increase? Will that come directly from AECL?

4 What additional funds are you  
5 going to be needing over and above what you are  
6 using right now?

7 DR. FEHRENBACH: As I tried to  
8 explain a little bit, as we move into the  
9 decommissioning phase of the site, the activities  
10 of the site will be tracked as part of the  
11 decommissioning activity. So there will be a  
12 gradual shift from an operational budget to the  
13 decommissioning budget.

14 That will shift the source of  
15 funds in our case such that we will be drawing  
16 down more of the funds from the segregated  
17 decommissioning fund that has been made available  
18 to us to date.

19 MEMBER GRAHAM: That segregated  
20 decommissioning fund is set at \$50 million?

21 DR. FEHRENBACH: Are you speaking  
22 of an integrated value over time or on an annual  
23 basis?

24 MEMBER GRAHAM: No. All I want to  
25 be assured of is: Are there going to be

1 sufficient funds in place at all times to do the  
2 decommissioning?

3 You have a budget to operate  
4 Whiteshell and you have a decommissioning fund.  
5 Will that money, as you need it in any specific  
6 year -- if you need more if you are moving faster,  
7 and so on, will those funds be there?

8 I am wondering where those funds  
9 will come from and exactly how it will be flowed.

10 DR. FEHRENBACH: Thank you for the  
11 clarification.

12 Yes, the amount currently  
13 available in the segregated decommissioning fund  
14 exceeds the amount expected to be required to  
15 complete certainly the Phase 1 decommissioning of  
16 Whiteshell.

17 MEMBER GRAHAM: So as funds are  
18 needed, you can draw out of that at any time.

19 How is that done? Is that through  
20 the approval of the AECL Board, or how is that  
21 done?

22 DR. FEHRENBACH: It is through the  
23 approval of AECL and the Treasury Board officials  
24 with responsibility for managing that segregated  
25 fund.

1 THE CHAIRPERSON: Dr. Giroux.

2 MEMBER GIROUX: I have a question  
3 to staff first.

4 I read in the presentation by  
5 AECL, on page 10, that shutdown operations have  
6 already been completed. This is under the  
7 existing licence, and this has been authorized by  
8 staff.

9 I think you might confirm this,  
10 that there might be an area between the end of  
11 shutdown and the beginning of decommissioning.

12 My question is: Was there a  
13 judgment by staff -- and that was before the  
14 comprehensive study was done -- that the shutdown  
15 operations did not carry any environmental  
16 consequences which might be detrimental?

17 MR. FUNDAREK: My name is Peter  
18 Fundarek, and I am Project Officer with the Wastes  
19 and Geoscience Division.

20 Early on in the process CNSC staff  
21 clarified with AECL the types of activities that  
22 could be carried out in relation to shutdown  
23 operations prior to the issuance of a  
24 decommissioning licence. We made sure that those  
25 types of activities that were carried out were the

1 same types of activities that AECL carried out  
2 under their operating licence and therefore had no  
3 impact on the environmental approval process that  
4 was under way at the time.

5 MEMBER GIROUX: Thank you.

6 My second question is for AECL. I  
7 am thinking of your quality assurance plans.

8 You used in your presentation the  
9 term "plan" and the term "manuals". I wonder if  
10 you could qualify how many plans you have for  
11 Whiteshell.

12 I think I understand that you have  
13 at least 15 manuals, and maybe more. As you said,  
14 you have manuals for different segments of  
15 operations.

16 Is there a single overall plan, or  
17 do you have a number of distinct plans?

18 MR. KUPFERSHMIDT: Bill  
19 Kupfershmidt, Atomic Energy of Canada Limited.

20 There is a hierarchy of  
21 documentation within the AECL quality assurance  
22 program.

23 With regard to Whiteshell, with  
24 regard to decommissioning activities there is one  
25 overall decommissioning quality assurance manual.

1 As part of that there is also a quality assurance  
2 plan that is being assembled, as we speak, for the  
3 details with regard to the specifics of executing  
4 the quality program at Whiteshell.

5 In fact, I think I may pass this  
6 question on to Michael Stephens for a more  
7 detailed assessment.

8 Michael.

9 MR. STEPHENS: Thank you, Bill.

10 I am Michael Stephens, the Quality  
11 Assurance Manager for Decommissioning and Waste  
12 Management. There will be two quality assurance  
13 plans in place at Whiteshell, one for the  
14 remaining operating facilities, the ones in  
15 Appendix B, and a second one for the part of the  
16 site that is being decommissioned, that is  
17 Appendices C and D.

18 The QA plan for the  
19 decommissioning facilities is being written now  
20 specific to the Whiteshell situation. The manual  
21 that has already been turned into the Commission  
22 provides a framework to write such plans for  
23 different sites, for example, there is one being  
24 updated for the Chalk River site as well, so that  
25 the manual is a framework and each plan provides

1 the details for a specific site.

2 Similarly, on the operation's side  
3 there is a nuclear operations QA manual that  
4 describes how we handle things across the company,  
5 plus a Whiteshell specific QA plan that is being  
6 put into place as well.

7 MEMBER GIROUX: Thank you. I  
8 think part of my question is a question of  
9 semantics.

10 Do you entertain a one-to-one  
11 relationship between program, plan and manual, or  
12 is there a difference between the terms?

13 MR. STEPHENS: The decommissioning  
14 QA manual describes the decommissioning program  
15 that AECL uses completely, I mean the total  
16 framework. Each plan includes the extra details  
17 that are specific to a particular site.

18 If I understand your question,  
19 that is the answer.

20 MEMBER GIROUX: Are there as many  
21 programs as there are plans and as there are  
22 manuals?

23 MR. STEPHENS: No. There can be  
24 several plans for a given manual depending on how  
25 many different projects or facilities or sites are

1 being discussed.

2 MEMBER GIROUX: Thank you. That  
3 answers my question sufficiently.

4 My third question is again for  
5 AECL. You are talking about, on page 21 of your  
6 presentation, four problem trenches. Seeing that  
7 you are going to move the waste to interim  
8 storage, my question is when is that plan to  
9 occur? At what time and what year are you  
10 planning to move the waste to interim storage? It  
11 wasn't clear. Is it during Phase 1 or later?

12 MR. KUPFERSCHMIDT: No, it is not  
13 to be conducted during Phase 1. It would be  
14 subsequent to the Phase 1 program.

15 MEMBER GIROUX: Is that Phase 2,  
16 then?

17 MR. KUPFERSCHMIDT: It would be  
18 during Phase 2.

19 MEMBER GIROUX: Thank you.

20 THE CHAIRPERSON: Dr. McDill.

21 MEMBER McDILL: Thank you.

22 I have just a few questions at  
23 this point. Could you tell me the number of  
24 qualified staff that will be present in the local  
25 area at the end of the six-year phase roughly?

1 MR. KUPFERSCHMIDT: Bill  
2 Kupferschmidt, Atomic Energy of Canada Limited.

3 With regard to decommissioning  
4 activities, we are anticipating that the current  
5 staffing level that we have for decommissioning  
6 will essentially increase for the next number of  
7 years and then towards the end of Phase 1 will  
8 actually decrease. The actual number will depend  
9 in fact just on how quickly we were able to  
10 expedite the execution of the Phase 1 work.

11 Currently, the plan is at the end  
12 of Phase 1 the number of staff will be less than  
13 we currently have.

14 MEMBER McDILL: What is the number  
15 you currently have, please?

16 MR. KUPFERSCHMIDT: In total at  
17 the site there are 250 employees.

18 MEMBER McDILL: How many of those  
19 would you consider to be highly qualified  
20 scientific staff?

21 MR. KUPFERSCHMIDT: That is a  
22 difficult question. I would suggest that all of  
23 them are very important employees, scientific and  
24 engineering staff and technical staff.

25 MEMBER McDILL: I will hold the



1 rest of my questions for later. Thank you.

2 THE CHAIRPERSON: Perhaps,  
3 Dr. McDill, if you don't mind, I could just add a  
4 little maybe.

5 Could you give us the type of  
6 employees that are contained in the present group?  
7 If you could just give an overview as to the type  
8 of employees that are on staff and what, over the  
9 six-year period, would be the type of people  
10 there? I think that perhaps could answer the  
11 question.

12 MR. KUPFERSCHMIDT: With regard to  
13 the activities at Whiteshell, we talked about  
14 approximately 250 staff. They are comprised of  
15 scientists, engineers and, if we are including the  
16 activities, engineering staff very disciplined  
17 within engineering. There are technical staff,  
18 laboratory staff. If we are including the waste  
19 management activities that are involved at the  
20 site as well, currently there are geophysicists  
21 and geoscientists involved as well. It is quite  
22 an encompassing group of individuals.

23 I am not sure what other level of  
24 detail I can provide.

25 THE CHAIRPERSON: As you go

1 through this process, this is the group that is on  
2 staff now, you have an operating facility and a  
3 group that is going towards decommissioning. My  
4 understanding is in six years you will have a  
5 group that will be more decommissioning than  
6 operating.

7 What would be the nature of this  
8 workforce in -- say if we took a snapshot in six  
9 years, what would be the changes that you would  
10 have and types of professions that you would have  
11 on site?

12 DR. FEHRENBACH: First, by way of  
13 background, let me refer back to the point in our  
14 application where we do say that currently we  
15 still have a small number of staff associated with  
16 R&D programs there. The extent to which that will  
17 continue will depend of course on our business  
18 needs for maintaining that activity.

19 At Whiteshell these staff are  
20 specifically associated with portions of the  
21 safety research program that has not yet been  
22 relocated from Whiteshell and the staff associated  
23 with underground research associated with spent  
24 fuel disposal. Whether or not these people are  
25 all there or a greater number or a smaller number,

1 will depend on things exclusive to the  
2 decommissioning activity, that is, other business  
3 decisions associated with what activities we're  
4 associated with.

5 Bill has been talking about the  
6 level of staff associated with decommissioning.

7 THE CHAIRPERSON: Yes. But I  
8 believe the question is acknowledging that there  
9 is an operating group there and that they will  
10 either stay there or move to other facilities. We  
11 are talking about the types of people that would  
12 be involved in decommissioning.

13 If we take a snapshot in six  
14 years, and we have heard what the employee mix is  
15 now, what would it look like in six years in terms  
16 of types of professions and skills in terms of  
17 qualified staff? I think that is the question.

18 MR. KUPFERSCHMIDT: What would be  
19 the case is we would have increased operational  
20 staff. We would also have an increasing, compared  
21 to the ratios we have today, of engineering  
22 support staff and radiation protection staff  
23 involved with monitoring the site. Those would be  
24 the kind of disciplines we would anticipate  
25 increasing in number to deal with the particular

1 hazards, et cetera, risks and tasks associated  
2 with the Phase 1 decommissioning.

3 THE CHAIRPERSON: Dr. McDill.

4 MEMBER McDILL: Thank you for  
5 those helpful clarifications.

6 You have a plan for six years, and  
7 you should know, or we should know, what  
8 activities will be going on at the end of six  
9 years. I would think that maybe not at this  
10 particular instant but you should have a pretty  
11 good idea of who you will need to have on site at  
12 the end of six years. I can reasonably understand  
13 at 60 years it being hard to tell but six years  
14 from now you should have a pretty good idea of who  
15 is going to be there and what they are going to be  
16 doing.

17 Can you give me a better balance  
18 of what staff may be present or ought to be  
19 present in six years?

20 MR. KUPFERSCHMIDT: Thank you. I  
21 think I am going to direct the question to Bob  
22 Helbrecht. Bob.

23 MR. HELBRECHT: Thank you, Bob  
24 Helbrecht, the former director for WL  
25 decommissioning.

1                   The team at the end of Phase 1,  
2                   once we have the facilities in storage and  
3                   surveillance, would have a security contingent,  
4                   environmental monitoring, radiation protection  
5                   staff and buildings maintenance. That is  
6                   primarily the team that would look after  
7                   facilities in terms of determining whether there  
8                   are any changes, monitoring them periodically to  
9                   determine that the condition we have established  
10                  for storage surveillance is maintained.

11                  Full security and firefighting is  
12                  maintained for the site. The other three  
13                  disciplines are environmental monitoring,  
14                  radiation protection and buildings maintenance.

15                  Thank you.

16                  MEMBER McDILL: Thank you.

17                  THE CHAIRPERSON: Dr. Barnes.

18                  MEMBER BARNES: I had the same  
19                  question, but just as a further follow up, could  
20                  you just clarify a little bit further of the  
21                  complement how much of the group towards the end  
22                  of six years would essentially be new people  
23                  imported for this decommissioning activity versus  
24                  essentially the retraining of existing people?

25                  MR. HELBRECHT: By and large at

1 the end of six years we would anticipate it is the  
2 same group with whatever turnover takes place as a  
3 result of people retiring or leaving and coming  
4 in. That is just because essentially the  
5 disciplines that are required for carrying out the  
6 decommissioning work are required, a continuation  
7 is required for the storage or surveillance  
8 period. So beyond normal turnover, I don't  
9 anticipate that there would be any new people in  
10 that group.

11 MEMBER BARNES: If this is out of  
12 order, Madam Chair, you will say so.

13 Would AECL again just like to  
14 provide a broader comment/perspective? You refer  
15 to it in your executive summary. What are your  
16 expectations for the eventual final destination of  
17 the wastes?

18 MR. KUPFERSCHMIDT: The intention  
19 would be again for some of the wastes in the  
20 in situ disposal would remain at Whiteshell. The  
21 remaining wastes would ultimately be located in a  
22 disposal facility when that facility becomes  
23 available within Canada.

24 MEMBER BARNES: At this point can  
25 you identify the kinds of wastes that you think

1 would remain locally? Could you clarify just what  
2 those would be?

3 MR. KUPFERSCHMIDT: The details?  
4 The waste is the in situ trenched waste, the low  
5 level wastes that are currently in the trenches.

6 I will redirect the question to  
7 Bob.

8 MR. HELBRECHT: The evaluation  
9 done for the in situ disposal of low level waste  
10 in trenches evaluated the entire set of 25  
11 trenches, roughly 20,000 metres cubed of  
12 contaminated waste and soil. Of those 25, 21 were  
13 deemed to be feasible for in situ disposal. The  
14 remaining four have wastes in them which we don't  
15 regard as suitable for in situ disposal and they  
16 will be remediated and the waste will be removed  
17 when we have disposal facilities available to  
18 transfer them to.

19 MEMBER BARNES: As I understand  
20 then, the kind of procedures you are adopting now  
21 will lead to in a sense a final repository on site  
22 of the majority of these low level wastes?

23 MR. HELBRECHT: It roughly becomes  
24 split half and half because there are low level  
25 wastes that are in above ground concrete bunkers,

1           engineered facilities, now which cannot remain  
2           in situ and will have to be transferred. So there  
3           is some 17,000 metres cubed that we expect to  
4           remain in the trenches and to be stabilized in  
5           that area, and the balance of low level waste now,  
6           either the four trenches for remediation and the  
7           waste stored in above ground bunkers, would be  
8           removed to a disposal site.

9                           MEMBER BARNES: To staff. On the  
10           issue of financial guarantees, could you again  
11           clarify the secured funding for this? Does this  
12           just apply to Phase 1 costs or to what extent does  
13           it apply over the longer 60 year period?

14                           MS MALONEY: It is Cait Maloney.  
15                           The financial guarantee that will  
16           be established under the licence will be for the  
17           whole project, all phases, the 60 years.

18                           THE CHAIRPERSON: Mr. Graham.

19                           MEMBER GRAHAM: Thank you. My  
20           question is then, on your site plan your site east  
21           of the Winnipeg River is approximately 10 square  
22           kilometres I would say. On the west side of the  
23           river it is smaller. On the west side of the  
24           river it doesn't show that there were any  
25           buildings in which Highway 11 ran through. Is



1           there any contamination on that side of the river,  
2           on the west side of the river?

3                         MR. KUPFERSCHMIDT:  No, there is  
4           not.

5                         MEMBER GRAHAM:  So that is just  
6           virgin land that was never used really by the  
7           Whiteshell for any depository of any waste or  
8           anything.

9                         MR. KUPFERSCHMIDT:  The majority  
10          of that land has been in fact leased back to the  
11          original owners or the descendants of the owners  
12          to operate as they had before.

13                        MEMBER GRAHAM:  So on the east  
14          side of the river you have about 10 square  
15          kilometres of property.  As you demolish a  
16          building the contents of that building, not the  
17          contents but the structure of the building and so  
18          on that has no low level waste in it, like  
19          concrete, lumber, siding or whatever it is, where  
20          will that be deposited?

21                        MR. KUPFERSCHMIDT:  The intention  
22          is that that would be taken to a landfill site.

23                        MEMBER GRAHAM:  On site?

24                        MR. KUPFERSCHMIDT:  Not  
25          necessarily.

1                   MEMBER GRAHAM:  When you are  
2                   tearing down a building, you will identify whether  
3                   the windows and the doors and things like that,  
4                   the siding that may not be contaminated, you say  
5                   it will go to a landfill.  Has it been determined  
6                   if the local landfill outside, off site, agreed to  
7                   take that material?

8                   MR. KUPFERSCHMIDT:  I am going to  
9                   redirect the question to Bob Helbrecht.  Bob.

10                  MR. HELBRECHT:  Bob Helbrecht,  
11                  former director for decommissioning.

12                  The planning was done on the  
13                  assumption that we will transfer non-radioactive  
14                  wastes off site to landfill facilities.  However,  
15                  those volumes are very far in the future and  
16                  arrangements, specific arrangements for what  
17                  landfills will take it have not been made.

18                  But that is the reference position  
19                  of the plan, that all non-radioactive waste goes  
20                  to off site facilities.

21                  MEMBER GRAHAM:  So what you are  
22                  saying, in Phase 1 then there will be no  
23                  demolition of buildings that have non-contaminated  
24                  material.

25                  MR. HELBRECHT:  There are

1 buildings being demolished in Phase 1 which have  
2 uncontaminated material. We will maximize recycle  
3 and for those we will have to make arrangements  
4 during Phase 1.

5 They have not been made. We do  
6 not have identified off-site landfills at this  
7 point to take the waste, but that is the reference  
8 position of the planning.

9 MEMBER GRAHAM: My question then  
10 would be to staff.

11 Would that be a licensing  
12 condition, that a depository in some landfill must  
13 be obtained before we proceed, because to me it  
14 would look a little strange to be planning to tear  
15 down a certain building next year, and so on, and  
16 then not know where the material is going to go.

17 Will that be a license condition?

18 MR. FUNDAREK: Peter Fundarek with  
19 Waste and Geoscience Division.

20 During the evaluation of the  
21 detailed decommissioning plans for each specific  
22 facility, part of the analysis looks at where the  
23 wastes are going to be sent, both the radiological  
24 and the non-radiological, to ensure that  
25 appropriate precautions are taken for the

1 radiological waste, appropriate precautions and  
2 agreements are in place for the non-radiological  
3 but hazardous wastes, as well as the non-hazardous  
4 wastes where they are going to be finally  
5 dispositioned.

6 So yes, we will be looking for  
7 that in the decommissioning plans for those  
8 facilities.

9 MEMBER GRAHAM: My question was,  
10 though, will it be a license condition?

11 MR. FUNDAREK: Peter Fundarek  
12 again.

13 The detailed decommissioning plans  
14 are part of the licence, so in effect it would be  
15 part of the licence itself without being a  
16 specific license condition.

17 MEMBER GRAHAM: Thank you.

18 Another question I have, the site.  
19 This facility has been in place over 45 years. I  
20 presume. I believe it is if I read correctly.  
21 The laboratories, and so on, are approximately  
22 50 years old.

23 Has there been a complete  
24 reevaluation of the site for historic reasons as  
25 to some isolated areas where there may have been

1 something dumped or not recorded or not recorded  
2 as well, say, 40 years ago or something? Has  
3 there been a complete evaluation of that site to  
4 make sure that all historical records have been  
5 checked to make sure that there is not something  
6 out on the back 40 that is not really known about?

7 MR. KUPFERSCHMIDT: Bill  
8 Kupferschmidt, Atomic Energy of Canada Limited.

9 As part of the environmental  
10 assessment process that was undertaken, a  
11 reasonably thorough analysis was done with regard  
12 to any spills, et cetera, that had taken place at  
13 the site. So I think it is fair to say that there  
14 is a reasonable understanding of any contaminated  
15 lands on the Whiteshell property.

16 MEMBER GRAHAM: Would CNSC staff  
17 care to comment again?

18 MR. FUNDAREK: Peter Fundarek,  
19 Waste and Geoscience.

20 In the project that is before the  
21 Commission, as part of it AECL did carry out a  
22 survey of what they characterized as the  
23 non-affected lands. They segregated and defined  
24 what they reasonably felt was what they considered  
25 affected lands where activities were carried out

1 and those that they considered non-affected.

2 They carried out a thorough survey  
3 of the non-affected lands which comprised the  
4 majority of the property and it was conducted  
5 through the use of aerial surveys and walking  
6 surveys and vehicle surveys over all of this area.

7 I didn't partake of that activity  
8 myself, but other CNSC staff did. I have been  
9 over much of the other areas in the Whiteshell  
10 site and the conclusion of the report that was  
11 carried out and confirmed by CNSC staff was that  
12 the unaffected lands do not appear to have been  
13 affected by the Whiteshell operations.

14 MEMBER GRAHAM: If I may, just one  
15 other question to CNSC staff.

16 Are there test wells on a uniform  
17 basis around that site where groundwater is tested  
18 and monitored, and so on? Are there groundwater  
19 testing done in any type of uniform way on that  
20 site?

21 MR. FUNDAREK: Peter Fundarek  
22 again.

23 Yes, there are groundwater  
24 monitoring wells in and around specific facilities  
25 such as the waste management area and the concrete

1           canister storage facility, around some of the  
2           buildings, particularly Building 200, and there  
3           are some further afield in what they considered,  
4           again, the affected areas. There are some  
5           monitoring wells along the way and there are  
6           discrete sampling points along the river and in  
7           some of the ditches on the property.

8                         MEMBER GRAHAM: I apologize if it  
9           has been given and I haven't found it, but are  
10          there test results from these wells available, or  
11          were they given to us as we went along or not in  
12          the presentation? I didn't see them, but I just  
13          wondered if they were there.

14                        MR. FUNDAREK: The results of the  
15          monitoring wells I don't believe were included in  
16          the presentation, but they were part of the  
17          environmental assessment that was carried out, the  
18          comprehensive study, and they are reported to CNSC  
19          staff on a regular basis in terms of annual  
20          reports.

21                        MEMBER GRAHAM: Is there anything  
22          negative to report on those? Since we don't have  
23          them, are you satisfied that the tests were all  
24          within the guidelines set forth by CNSC?

25                        MR. FUNDAREK: Peter Fundarek

1           again.

2                               Yes, CNSC staff have evaluated the  
3       results of the environmental monitoring and found  
4       them to be acceptable.

5                               THE CHAIRPERSON: Thank you.

6                               I just would like to have -- I  
7       don't want this question to preclude the  
8       questioning that will come from the intervenors,  
9       so this is just a baseline question that will  
10      provide some information in a broader context.

11                              The definition of the word  
12      "greenfield" we have talked about -- Dr. Barnes  
13      has asked some questions with regards to where the  
14      low-level waste that will remain on-site versus  
15      that that is projected for removal, et cetera.

16                              Could the CNSC staff give us some  
17      enlightenment as to what is considered either  
18      national or international practices with the word  
19      "greenfield" and what is some of the criteria that  
20      would be useful for us to have in our minds as we  
21      look forward to the future use of this property?

22                              MS MALONEY: It is Cait Maloney  
23      here.

24                              The use of the term "greenfield"  
25      in decommissioning parlance is when one assumes



1           that the property or the facility could be used  
2           for any general public use. There could be a  
3           daycare sited there or some other thing. There  
4           would be no restriction on the facility  
5           whatsoever. This is considered endpoint in some  
6           situations.

7                           For other situations it may not be  
8           practical to get to "greenfield" and the phrase  
9           that is being used then is "brownfield". That is  
10          when a facility or a property can be used for  
11          other industrial or restricted purposes.

12                           So that is the sort of generic  
13          context there.

14                           THE CHAIRPERSON: Thank you.

15                           With that question I will now move  
16          to -- oh, Dr. Barnes.

17                           MEMBER BARNES: I would just like  
18          to follow up on one of Mr. Graham's questions,  
19          because I found the answer a little strange.

20                           To AECL, you plan to dispose of a  
21          substantial amount of material off-site. I  
22          presume this would go into your municipal  
23          landfills?

24                           MR. KUPFERSCHMIDT: Yes.

25                           MEMBER BARNES: But to this point

1           you haven't had any discussion or negotiation with  
2           those municipal authorities about this process?

3                       MR. KUPFERSCHMIDT: Bill  
4           Kupferschmidt, Atomic Energy of Canada.

5                       There have been no specific  
6           discussions with regard to the placement of these  
7           wastes and the landfill sites in various  
8           municipalities.

9                       MEMBER BARNES: Why would that be,  
10          given that you are looking for a licence and we  
11          are looking for activities in the so-called  
12          immediate future.

13                      MR. KUPFERSCHMIDT: Again Bill  
14          Kupferschmidt, Atomic Energy of Canada Limited.

15                      The take down of any buildings,  
16          et cetera, that are envisioned will certainly be  
17          towards the end of the Phase 1 program. So that  
18          certainly is towards the end of the six-year  
19          timeframe. So the urgency with regard to entering  
20          that discussion has not yet emerged.

21                      MEMBER BARNES: This whole  
22          process, that is not a major budget factor, do you  
23          think, for the costs involved in that disposal in  
24          these landfill sites?

25                      MR. KUPFERSCHMIDT: Relatively --

1 well, I'm going to again redirect the question to  
2 Bob Helbrecht.

3 Bob.

4 MR. HELBRECHT: Bob Helbrecht,  
5 former Director for Decommissioning.

6 First of all, the volumes from  
7 Phase 1 are relatively small. There are only  
8 three buildings that are being considered for  
9 demolition of any size. The recycle component  
10 should be relatively high.

11 The cost of dealing with  
12 radioactive wastes is, of course, much higher than  
13 those from non-radioactive waste and the impact on  
14 budgets will be relatively small, although we do  
15 anticipate that we would have to pay tipping fees  
16 to local landfills to dispose of it.

17 MEMBER BARNES: Given the concerns  
18 expressed by the intervenors, which we will come  
19 to though, about the process of decommissioning, I  
20 am surprised that you haven't had at least this  
21 discussion with them.

22 MR. HELBRECHT: Certainly it is an  
23 element of the Phase 1 work that needs to be  
24 undertaken early in the schedule, but it has not  
25 been undertaken to this point.

1 THE CHAIRPERSON: So then we will  
2 now move to the interventions phase.

3 First of all, I would like to  
4 welcome those people who have joined us, have come  
5 in from Manitoba particularly for the meetings  
6 today and have chosen to represent themselves  
7 orally. As you are aware, there also is a  
8 possibility that people will submit written  
9 submissions. It is not the case in this area, but  
10 they have had that offer as well before the  
11 Commission.

12 I would like to remind intervenors  
13 that we have allotted approximately 10 minutes for  
14 each oral presentation and I would appreciate your  
15 assistance as we maintain this schedule. However,  
16 I would like to assure you that your more detailed  
17 written submission that has been received by the  
18 Commission has already been read by the Commission  
19 Members and has been dutifully noted and it will  
20 be considered in our Reasons for Decision and it  
21 will be noted as such.

22

23 **02-H19.2 / 02-H19.2A**

24 **Oral presentation by Local Government District of**  
25 **Pinawa**

1 THE CHAIRPERSON: With that  
2 preamble, I would like to now move to the oral  
3 presentation by the Local Government District of  
4 Pinawa, which is outlined in CMD Document 02-H19.2  
5 and 01-H19.2A. I believe we have Mayor Simpson  
6 with us this morning.

7 Mayor Simpson.

8 DR. SIMPSON: Thank you, Madam  
9 Chairman.

10 Before you start the clock, I  
11 would just like to clarify a few things on the  
12 process here.

13 You mentioned that we should be  
14 confining our comments to Phase 1. We have a  
15 total dissatisfaction about the whole plan as it  
16 stands and we believe that a lot of projects in  
17 Phase 2 should be moved into Phase 1 and it is the  
18 same for 3 into 2. So we will be discussing  
19 basically not what is in Phase 1 but what isn't,  
20 if that is all right.

21 The second thing is, Dr. Keith  
22 Harvey sent in a written submission which was  
23 received late. I have included some of his  
24 concerns in my presentation and I would like to  
25 appeal to the Chair to perhaps give me a little

1 more time.

2 I promise not to exceed  
3 20 minutes, but we have travelled a very long  
4 distance, we have spent an awful lot of time  
5 preparing this, we have a number of points that I  
6 feel if I run over them too fast, some of them are  
7 provocative, I want to ensure that they are  
8 presented in the right sense.

9 THE CHAIRPERSON: Mr. Simpson, you  
10 didn't request 20 minutes in the submission.  
11 Mr. Harvey's submission should be treated as its  
12 own. It is a written submission to the Commission  
13 and I can assure you that we have read the  
14 submissions, all the submissions. That is the  
15 role of the Commission and we have done that.

16 So although I am noted as a person  
17 who likes to make sure the intervenors have an  
18 opportunity, you were aware of the 10-minute  
19 guideline before you came here today and certainly  
20 I would like you to be as close to 10 minutes as  
21 possible. I will be as reasonable a Chair as  
22 possible, but 20 minutes is out of the question.

23 So please start. I will start the  
24 clock now and we would like you to cover your  
25 submission as much as possible.

1 DR. SIMPSON: Just before you do,  
2 I did inquire about the timing and I was not told  
3 that I could apply for more time, otherwise I  
4 would have.

5 THE CHAIRPERSON: No, no. There  
6 isn't an application for more time. I was  
7 referring specifically to your comment that you  
8 were adding together the written submission from  
9 another intervenor who that intervention will be  
10 treated on its own. It is a submission on its  
11 own, it is recorded as its own and it will be  
12 treated in our discussion as its own. So there is  
13 no adding together at this point of that.

14 So, Mr. Simpson --

15 DR. SIMPSON: One last point then.  
16 My citizens are very upset that I have to come to  
17 Ottawa to appeal a decision that affects the  
18 people of Manitoba. They are upset not  
19 necessarily because they would have brought  
20 additional submissions, they may or may not have,  
21 but because they cannot be sitting out there in  
22 the audience to ensure that we have a fair and  
23 just process.

24 So in that sense I just wanted to  
25 put that concern on the table before I start.

1                   By the way, it is Dr. Simpson. I  
2                   have 35 years of experience in the nuclear  
3                   industry, including a senior managership at AECL,  
4                   and I have almost 20 years experience in  
5                   international nuclear matters with the OECD, so I  
6                   do know of what I speak.

7                   Thank you. I will start now.

8                   I'm not speaking simply on behalf  
9                   of the LGD of Pinawa, but also of the Community  
10                  Leader's Committee which consists of eight  
11                  councils in the region. All those councils have  
12                  passed resolutions condemning AECL's plan, which  
13                  is primarily on the timing. There are 20,000  
14                  citizens involved in these communities living  
15                  within 30 minutes of Whiteshell.

16                  In addition to that,  
17                  19 communities in the eastern part of Manitoba  
18                  passed a resolution condemning the plan, and again  
19                  it is the timing of the events at the Association  
20                  of Manitoba Municipalities Eastern District  
21                  Meeting in June 2000.

22                  No responses to any submissions  
23                  were received, either from CNSC or CEAA during the  
24                  past three or four years that we have been  
25                  objecting to this. This is the first chance we



1           have had to have a public hearing of some of our  
2           concerns.

3                         We feel that the dispositioning of  
4           the issues in Volume 3 is one-sided and flawed and  
5           again we are aggrieved that there are no  
6           opportunities for public hearings in the region.

7                         We believe that the public  
8           consultation process which AECL has been required  
9           to hold has not been adequately performed. I will  
10          come to a little more detail on that later, but  
11          basically it has been an announcement of what  
12          their intentions are, basically listening to our  
13          objections and then ignoring them.

14                        I must say again that deferring  
15          decommissioning of facilities such as hot cells  
16          and hot labs and contaminated ground is not normal  
17          practice in any OECD country that I know of. AECL  
18          keeps coming back and saying it is and the example  
19          they use is the U.K. Atomic Energy Authority sites  
20          at Harwell and Winfrith.

21                        In actual fact, the only items  
22          that are being deferred for 50 years there are the  
23          reactor cores themselves and the high level -- the  
24          intermediate level waste stores. Everything else  
25          is probably nearly completed their decommissioning

1 now.

2 We were there four years ago. We  
3 saw the hot cells coming down and the hot labs  
4 being cleaned up. That is an important issue.

5 Double handling the waste does not  
6 increase risk. If you handle it now and properly  
7 containerize it and put it in a safe store,  
8 handling it later to go to its ultimate  
9 destination does not increase the risk.

10 However, there are huge human  
11 factor risks for future decommissioning crews with  
12 no firsthand knowledge of the site.

13 We have no guarantees that AECL  
14 will ever return or keep to schedule and we have a  
15 litigation of broken promises in AECL over the  
16 last seven years concerning our economic  
17 redevelopment.

18 We contend that it will be  
19 impossible to find qualified staff to monitor this  
20 site in that Phase 2. People will just not want  
21 to take a job where they just sit and watch meters  
22 for an indefinite period.

23 This is the chart that came out of  
24 the Nuclear Energy Agency Forum for Public  
25 Participation which was hosted by NRCan about a

1 month ago in Ottawa. This describes the process  
2 for public participation between the stakeholders  
3 in the community and the nuclear industry.

4 Step 1 is to inform. AECL has  
5 done that.

6 Step 2 is to consult. They have  
7 done a bit of that. They haven't really acted on  
8 any of our suggestions.

9 The last three have been ignored  
10 completely: involving, collaborating and  
11 empowering.

12 So I suspect that what will come  
13 out of this meeting is that we will just narrow  
14 the focus down to: Well, is it safe or not, what  
15 they are doing now?

16 Well, what is safe? Safety in  
17 this industry, as I think most people know, is  
18 developed through international consensus using  
19 groups such as the OECD Nuclear Energy Agency and  
20 the International Atomic Energy Agency. Out of  
21 that there is some consensus that has come  
22 forward.

23 Burying fuel in the ground is  
24 not safe.

25 Trench burial is no longer

1 acceptable.

2 Plastic wrap and low-level waste  
3 is no longer acceptable. It is traditionally  
4 packaged now in sealed metal containers.

5 Relying on future generations to  
6 do work that could be done is not safe. I have  
7 been on the Web site for the NEA this week and I  
8 have four at random fact sheets from four  
9 countries which show -- all state on page 1 that  
10 this is the case, that it is best to use the  
11 people who know the site and are familiar with it  
12 to do the decommissioning and not leave it for an  
13 unfamiliar staff sometime in the future.

14 There are a few facts of life  
15 here. AECL basically say they can't decommission  
16 now because there is no national low-level waste  
17 facility. Well, there probably never will be one.  
18 The country is too large and no community would  
19 accept one. The people of Port Hope are forced to  
20 accept their own waste after 800 attempts in  
21 800 communities to look for a place to put a  
22 repository.

23 AECL has done some work in looking  
24 at waste disposal facilities. IRUS may or may not  
25 be suitable. But why not use the Whiteshell Labs

1 as a demonstration to develop a low-level waste  
2 facility. We have no problem with a disposal  
3 facility for low-level waste being located on  
4 site. We do have a problem with it sitting there  
5 in trenches.

6 Continuous surface storage in  
7 canisters is a strong choice for final destination  
8 for high-level waste. We may never dig a  
9 repository. So let's get that stuff out of the  
10 tile holes, that fuel that is buried in the ground  
11 now, package it and build a canister for it and  
12 then wait to see what the new waste management  
13 organization comes up with.

14 Who is responsible for this waste  
15 facility? AECL has refused to take responsibility  
16 or even acknowledge that it might be their  
17 responsibility.

18 At the NRCan Forum on  
19 Relationships a month ago, Peter Brown presented  
20 the paper in which this statement was read "the  
21 waste producer and owners are responsible" it  
22 says, for building these facilities. I clarified  
23 that in a question to the author at the end of his  
24 presentation and he said "Yes, AECL should build a  
25 facility". So let's get on with it.

1                   There is also an interesting paper  
2                   from Mr. Ferch of the CNSC staff which you can  
3                   read for yourself in the slide, but the last  
4                   sentence is important. It basically says: We  
5                   have to consider the environment, "including  
6                   social and economic factors".

7                   Mr. Harvey's submission basically  
8                   says that the CNSC process for considering social  
9                   and economic factors is flawed. I think it has a  
10                  lot of validity and that document is currently  
11                  with our legal people in Pinawa, or at least  
12                  Pinawa's legal staff in Winnipeg.

13                  So what is a socioeconomic issue?  
14                  Well, we didn't realize we had public  
15                  participation. The first meeting of the Liaison  
16                  Committee, which was held about a month ago and  
17                  which was in the presentation by AECL, indicated  
18                  they had formed this committee.

19                  What initially happened there was,  
20                  first of all Mr. Helbrecht denied that the  
21                  province did not approve of our plan. You can see  
22                  that is not true. Well, you will in a minute.

23                  Then again he questiones, one of  
24                  my fellow mayors, as to whether or not he really  
25                  did support the things I was saying.

1                   So there was an attempt there to  
2           divide up the committee. That is not public  
3           participation. That is not good public relations  
4           and it bodes ill for the future of that  
5           organization.

6                   Intermittent decommissioning  
7           operations, people coming into town to do a  
8           project and then leaving, that does nothing for  
9           our community. It is disruptive. It puts a  
10          cyclic demand on our hotels and accommodations.  
11          These people will not be buying houses in town and  
12          living there and supporting the economy.

13                  Our trip to the U.K. You have a  
14          description of that in the paper. We find that  
15          both the U.K. Atomic Energy Authority and British  
16          Nuclear Fuels in Sellafield put working with the  
17          communities to get a consensus as a critical  
18          element.

19                  The continuing presence of a  
20          decommissioning and waste management operation on  
21          the site would maintain some stability for the  
22          economy and allow us time to diversify the economy  
23          as to become less dependent on AECL.

24                  Endeavours such as this in the  
25          U.K. and U.S.A. have been highly successful

1           because of the full commitment by UKAEA and the  
2           Department of Energy in the respective cases.

3                         Finally, the delay of the release  
4           of land which this plan presents us prevents us  
5           from doing any economic growth in that land. We  
6           see up to \$20 million of potential housing  
7           assessment for instance on the Riverside property  
8           on that plant site, and it is also the only  
9           suitable land on the LGD for large industrial  
10          projects.

11                        So what do we want? We want AECL  
12          to start now. They should have started seven  
13          years ago to build a facility for low-level waste.  
14          It is criminal that they would say "We don't  
15          expect one to be available for 25 years" when in  
16          fact every other OECD country either has such a  
17          facility or has one on the drawing boards or under  
18          construction.

19                        This is AECL's responsibility and  
20          a condition of their licence should be that they  
21          start right away to put one together.

22                        We want the standpipes with fuel  
23          buried in the ground started immediately and not  
24          deferred until there is a repository and some  
25          decision is made as to the future determination of



1 where high-level waste will go.

2 We do not object to a proper  
3 engineered canister storage for high-level waste  
4 or the low-level waste facility on our site, as  
5 long as they don't become a national facility. We  
6 could entertain being a low-level waste facility  
7 for western Canada, but certainly not for Ontario.

8 We want a continuous  
9 decommissioning presence until the job is  
10 complete. There are advantages to this. AECL can  
11 build a competent decommissioning team, which they  
12 seem to want to do, with detailed knowledge of the  
13 site. In 20 years we can have all the waste put  
14 into a -- this is in AECL's own plan. We can have  
15 it in 20 years. We can have all the waste and  
16 proper facilities.

17 Properly getting the waste into  
18 secure and safe containers now eliminates the risk  
19 of handling it in the future and steady employment  
20 at the site is much better for the local economy  
21 than the disruption of large crews coming in.

22 And again the issue of land  
23 release is important for future industries.

24 There is a question of trust here.  
25 In the last seven years we have gone through a

1 whole myriad of broken promises and backing out of  
2 deals with AECL to basically reinvent the plant  
3 site. I won't go into the details, you can ask  
4 questions if you wish. But the result of all  
5 these broken promises and back pedalling and false  
6 statements has resulted in AECL having zero  
7 credibility in Manitoba.

8 We are concerned that if AECL is  
9 allowed to finish Phase 1 and go away and leave  
10 the plant site -- somebody was asking about the  
11 numbers. An eminent colleague of mine in the U.K.  
12 calls AECL's decommissioning plan: Putting a  
13 padlock on the door and leaving a man and a dog.  
14 We don't want that.

15 We feel that once AECL is gone it  
16 is going to be awfully hard to get them back to do  
17 anything because by then there will be some  
18 tremendous decommissioning requirements back east  
19 which will take all the available talent in the  
20 country.

21 So, summing up, what we want is:

22 We do not want this licence to be  
23 issued until AECL revises the plan to include the  
24 provision of a low-level waste disposal facility;

25 A fast-track plan to remediate the

1 buried high-level waste;

2 Continuous decommissioning to  
3 greenfield based on the 20 year option and early  
4 land release. We will except from that waste  
5 stores if they are properly built WR-1 reactor.

6 A planning process that  
7 incorporates the input, collaboration and buy-in  
8 from the local communities.

9 Because of this trust issue, we  
10 want firm commitments to a schedule with penalties  
11 for failure; and

12 We want the full funding for  
13 decommissioning in place for the whole project.  
14 We want that upfront so it doesn't burden future  
15 generations.

16 It has been my experience over the  
17 years, particularly in the safety in the licensing  
18 area for power reactors, that CNSC has a poor  
19 record of holding licensees to promises, so we are  
20 very concerned about conditional licences that  
21 say: We are going to determine what the cost and  
22 budget is and where the money is going to go, and  
23 so forth. We would like to see that upfront  
24 before the licence is issued.

25 You can ask questions about that

1 comment. It is provocative. But I will just say  
2 one thing that might tweak your memory, and that  
3 is generic licensing issues.

4 I just have a few slides here of  
5 what a real low-level waste repository looks like.  
6 This is the Drigg site at Sellafield in England,  
7 which is a national facility. Low-level waste is  
8 basically locked up there in three different  
9 barriers, including metal containers, a cement  
10 grout and then the shipping containers that you  
11 see. Finally, when that is filled it will be  
12 covered with an impermeable cap.

13 This is a container for  
14 intermediate-level waste. It is stainless steel,  
15 it has a welded top on it and it is placed in an  
16 intermediate waste store, which is what you see  
17 here. I can't remember if this is Sellafield or  
18 Harwell but, in any case, that is where it will be  
19 stored until such time as the U.K.'s final  
20 disposal option is developed.

21 This is a picture of the bottom of  
22 the spent fuel bay at the steam generating heavy  
23 water reactor at Winfrith, England, one of the  
24 UKAEA establishments. You will see myself and  
25 Dave Wotton, who will be following me shortly,

1 standing at the bottom of that. That has been  
2 cleaned to such a degree that when the project was  
3 finished they held a reception on the bottom of  
4 that pool. That is what we see as  
5 decommissioning.

6 This is an active laboratory which  
7 has been scabbled and cleaned to the extent that  
8 it is ready for refurbishing for another tenant  
9 and the nuclear licence can be removed.

10 So basically I close with a title  
11 "Nuclear Responsibility".

12 There was a very interesting  
13 report here. It is a White Paper from the U.K.  
14 government, a strategy for action. It came out in  
15 July and in there there is a pop-up statement that  
16 tweaked my mind. It says:

17 "The UK Nuclear programme was  
18 at the leading edge of  
19 technology when legacy plants  
20 and facilities were built and  
21 operated. More than fifty  
22 years on, the government is  
23 determined that the UK should  
24 again lead the way in dealing  
25 with the challenges involved

1 in clean up..."

2 Unfortunately, only the first  
3 sentence would apply in Canada. Ladies and  
4 gentlemen, you have the option to change this.

5 Thank you.

6 THE CHAIRPERSON: Thank you,  
7 Dr. Simpson.

8 The floor is now open for  
9 questions from the Commission Members.

10 Dr. Giroux.

11 MEMBER GIROUX: Yes. The first  
12 question I think I would like both AECL and staff  
13 to address. It concerns the availability of  
14 staff.

15 Mr. Simpson makes an argument that  
16 the functions which will be offered would not be  
17 interesting for high level people or highly  
18 qualified people.

19 What is your reaction to this?

20 --- Pause

21 MR. KUPFERSCHMIDT: AECL is  
22 committed to maintaining and developing qualified  
23 resources while benefitting from national and  
24 international expertise to deliver the Whiteshell  
25 decommissioning program. At the end of Phase 1

1 AECL will have a well-characterized and understood  
2 interim end state that is documented. This  
3 knowledge base will be maintained and updated  
4 during the storage surveillance phase.

5 In addition, decommissioning can  
6 be expected to be a significant and ongoing and  
7 growing business for Canada and internationally,  
8 which will provide a growing body of resources  
9 available to carry out the range of projects,  
10 including the Whiteshell decommissioning project.

11 So we anticipate having an  
12 extensive expertise with regard to dealing with  
13 decommissioning issues within Canada and that that  
14 expertise will be available to address the issues  
15 that Dr. Simpson has raised.

16 MEMBER GIROUX: Do you have an  
17 indication, based on the past few years, on which  
18 you could base a judgment? Have you been keeping  
19 your staff or have staff started indicating that  
20 they might be looking for careers in other places  
21 because of the decommissioning, the closing down  
22 of operations?

23 MR. KUPFERSCHMIDT: Bill  
24 Kupferschmidt, Atomic Energy of Canada.

25 With regard to the decommissioning

1 activities at Whiteshell, in fact the staffing  
2 levels have increased over the last while. Other  
3 activities at Whiteshell have in fact decreased as  
4 a result of our relocating R&D programs from  
5 Whiteshell to Chalk River.

6 But certainly the resourcing up of  
7 staff at Whiteshell to deal with Phase 1  
8 decommissioning has in fact been increasing. In  
9 fact, there have been several examples where staff  
10 who have been associated with programs that were  
11 being relocated to Chalk River and have in fact  
12 taken up responsibilities within the  
13 decommissioning program at Whiteshell.

14 So we have been able to retain  
15 expertise and been able to attract other expertise  
16 to assist us with regard to executing -- in  
17 preparation for executing the Whiteshell  
18 decommissioning program.

19 MEMBER GIROUX: Has turnover been  
20 remaining stable or increasing or decreasing over  
21 the past few years?

22 MR. KUPFERSCHMIDT: Again,  
23 associated with the decommissioning program it has  
24 been -- the staffing levels have maintained, the  
25 turnover has been, I think, typical. Again, as I



1           have indicated, we have been attracting other  
2           staff, other individuals to join the program.

3                         MEMBER GIROUX: Thank you.

4                         Staff now?

5                         DR. FEHRENBACH: If I could just  
6           add to that. Paul Fehrenbach.

7                         I guess I would make the  
8           observation that the need for staff with intimate  
9           knowledge of the facilities is most important  
10          during the Phase 1 activities when a lot of the  
11          characterization and documentation, detailed  
12          documentation with respect to the actual  
13          facilities is done. I suppose that if that were  
14          to be delayed indefinitely, then the risk of  
15          losing those staff who knew the facilities would  
16          begin to increase.

17                        MEMBER GIROUX: Staff, do you  
18          share AECL's general optimism about maintaining  
19          qualified staff, at least during Phase 1?

20                        MR. HOWDEN: Barclay Howden  
21          speaking.

22                        Yes, we agree with that statement.

23                        I think in terms of the issue  
24          raised by Dr. Simpson that this is a very  
25          important issue. We have coined this issue as a

1       loss of knowledge issue and, if I could, I would  
2       like to describe the position that we have taken  
3       on this particular issue.

4                 One, this is one of the primary  
5       issues that needs to be continuously managed. In  
6       general terms we have looked at two sources of  
7       knowledge that are available.

8                 One is that knowledge that is  
9       learned or passed on from person to person, which  
10      is very much to do with the people working there  
11      and being familiar with the facility. We have  
12      called this local knowledge.

13                The other type of knowledge is the  
14      documented knowledge. I describe this as data,  
15      design information such as flow sheets, design  
16      manual specifications, inventories, operating  
17      procedures, hazards assessments, detailed  
18      decommissioning plans and preliminary  
19      decommissioning plans.

20                Local knowledge can have benefits  
21      during decommissioning. We acknowledge this.  
22      Having the people who have been there is very  
23      important. Also, it has great benefits during  
24      planning for decommissioning, which I think  
25      Dr. Fehrenbach is alluding to.

1                   On the planning side, in our view  
2                   a significant amount of work has been done using  
3                   this knowledge in the production of the detailed  
4                   decommissioning plans and the shutdown plans.

5                   Also, during Phase 1 we expect  
6                   that another significant amount of work will be  
7                   done further on detailed decommissioning plans and  
8                   preliminary decommissioning plans for facilities  
9                   that are more out in the future.

10                  Some of the work is dependent on  
11                  some of the assessment work planned in Phase 1 so  
12                  more information needs to be gathered.

13                  But I would like to point out that  
14                  one of the key elements of a preliminary  
15                  decommissioning plan, which is sort of the first  
16                  planning document, is the identification of the  
17                  information that needs to be developed and  
18                  available to develop detailed decommissioning  
19                  plans in the future. It is very important to note  
20                  that this information needs to be available now or  
21                  has to be produced shortly. I would say "shortly"  
22                  is Phase 1 of this particular project before it  
23                  starts to be lost.

24                  From this perspective, CNSC staff  
25                  has used our human factor specialists to assist in

1 the assessment of licensee decommissioning  
2 planning documents, partly to look at the specific  
3 concerns of knowledge retention.

4 As well, I would like to tie in  
5 that it should be noted that quality assurance  
6 requirements include proper retention and  
7 maintenance of records.

8 The other point is, even with  
9 local knowledge which, as we have said, is very  
10 important, we do expect the work to proceed very  
11 much on the basis of documented knowledge,  
12 documented processes, as well as proceeding  
13 cautiously using the support programs such as QA,  
14 radiation protection and environment protection.

15 What we have tried to do is take a  
16 conservative view of what knowledge can be relied  
17 upon in the future. In our opinion, we have taken  
18 a very tough stance with AECL in making them  
19 develop high quality planning documents and to put  
20 in a solid follow-up program.

21 Our position that we have taken is  
22 that the local knowledge would be of great benefit  
23 and we would really like it to be there. In its  
24 absence or as it fades with time we have to go  
25 back to what can be retained for a long period of

1 time so we have tried to put a lot of our focus on  
2 the document retention and planning upfront trying  
3 to use that knowledge as much as possible.

4 MEMBER GIROUX: Thank you. That  
5 is very informative.

6 My other question concerns the  
7 socio-economic aspects which have been raised by  
8 Dr. Simpson. In this sort of licence application,  
9 Commission members don't have to see the  
10 comprehensive study. It has been done, there has  
11 been a decision by the minister and we are looking  
12 at the licence application, as the Chair has  
13 indicated.

14 But just for at least my  
15 information, could you tell me whether the  
16 socio-economic aspects have been taken into  
17 account in the comprehensive study?

18 MS MALONEY: Cait Maloney.

19 The thing we have to bear in mind  
20 is the project that is before the Commission is  
21 the actual decommissioning work. That is the  
22 activity that is triggering the comprehensive  
23 study. It was not the decision to close the  
24 Whiteshell facility. So the socio-economic  
25 considerations that were considered in the

1 comprehensive study were the implications of the  
2 decommissioning activities, not of the decision to  
3 decommission.

4 With that I can say that, yes --

5 THE CHAIRPERSON: Sorry, I think  
6 it was not the decision to close, I think. If you  
7 could just reiterate that sentence. I think  
8 perhaps there was some mix up of words here.

9 MS MALONEY: I'm sorry. Did I  
10 garble? I apologize.

11 The project before the Commission  
12 is the proposed decommissioning activities. It is  
13 not the decision to close the facility.

14 THE CHAIRPERSON: Dr. McDill.

15 MEMBER McDILL: Thank you. I have  
16 a few questions I think probably for staff or AECL  
17 as is more appropriate.

18 What is the approximate distance  
19 from the river to the trenched areas, straight  
20 line distance?

21 MR. HELBRECHT: Bob Helbrecht,  
22 former director for decommissioning.

23 It is about a kilometre and a  
24 half.

25 MEMBER McDILL: Statistically

1 speaking, has there been a study on whether a 50  
2 year flood, a 100 year flood or a 200 year flood  
3 is likely to occur in that area?

4 MR. HELBRECHT: Yes. We have  
5 reviewed Manitoba Hydro records who have done  
6 evaluations of the impact of a dam break above the  
7 site and the impacts on the Whiteshell Laboratory  
8 site. It has concluded that there is not a 100  
9 year effect.

10 THE CHAIRPERSON: Just a moment  
11 please. We will leave the questioning and then we  
12 will come back.

13 MEMBER McDILL: I am not so much  
14 interested in dam breakage as flash flooding that  
15 occurs from serious rainstorms.

16 MR. HELBRECHT: Again, the  
17 question was relative to impacts of heavy rainfall  
18 and local flooding?

19 MEMBER McDILL: The distance from  
20 the river, the trench site and heavy rainfall,  
21 yes.

22 MR. HELBRECHT: Certainly we have  
23 had heavy rainfalls in the area and there is at  
24 time surface water standing in the area. The main  
25 component for controlling the movement, transport

1 of radionuclides from the area is in fact the  
2 geology in the area, the clay soils. They are  
3 particularly retentive to cesium, strontium and  
4 actinides.

5 All of our indications on  
6 monitoring, taking into account different water  
7 levels and the fact that water table moves up  
8 down, do not indicate any substantial movement  
9 within the facilities.

10 MEMBER McDILL: Thank you.

11 If I understand you correctly,  
12 there has not been a statistical 100 year flood in  
13 that area.

14 MR. HELBRECHT: That is my  
15 recollection of the Manitoba Hydro data.

16 MEMBER McDILL: Thank you.

17 DR. SIMPSON: Dr. Simpson, would  
18 you like to comment on that specific question?

19 DR. SIMPSON: Yes. The flooding  
20 issue, we raised this at some of these meetings  
21 that they had and we kept coming back to this dam  
22 breaking scenario. We are quite confident the dam  
23 is going to be intact for 100 years.

24 But in Manitoba in the last three  
25 years we have had 20 centimetre rainfalls in the



1 matter of a few hours. It basically flooded all  
2 of the farms in western Manitoba three years ago  
3 and put them out of commission for a year. More  
4 recently we had serious flooding in southeastern  
5 Manitoba, not very far from where we are, with  
6 similar rainfalls which put their farms out of  
7 commission for a summer.

8 These are becoming more and more  
9 common with the weather changes. We know that  
10 they have not done a risk assessment on this  
11 particular case and we would like to see one.

12 THE CHAIRPERSON: Is there a  
13 further comment from AECL and then staff on that  
14 specific matter?

15 MR. HELBRECHT: Yes. I would just  
16 add to that that our safety assessments for the  
17 waste management facilities have taken into  
18 account local water and water table conditions.  
19 The water table in the area does fluctuate up and  
20 down.

21 In fact, in the spring it is very  
22 near the surface. That is not much different than  
23 if you had massive rainfalls which had puddling or  
24 collections on the surface. I fall back on the  
25 statement I made earlier, our monitoring indicates

1           that there is no movement in the near facility  
2           zone, and by "near facilities" I mean -- the most  
3           recent evaluation was on the low level waste  
4           trenches. The sampling there was done adjacent to  
5           the trenches, to the depth of trench and in the  
6           upper cap, and there was no indication within a  
7           metre on either side of the bunkers, of the  
8           trenches, of movement of radionuclides.

9                           THE CHAIRPERSON: Staff?

10                          MS MALONEY: Cait Maloney. I will  
11           ask Dr. Thompson to comment.

12                          DR. THOMPSON: Patsy Thompson. I  
13           am Director of the Environmental Protection and  
14           Audit Division.

15                          The comprehensive study that was  
16           done for the decommissioning project included in  
17           its scope a requirement to look at the impacts of  
18           the environment on the project. The assessment  
19           considered extreme rain events and flooding and  
20           their potential impacts on the decommissioning  
21           project.

22                          The information essentially that  
23           has just been provided confirms the conclusions of  
24           the EA that those types of events would not have a  
25           significant impact on the facilities and the

1 ability of the facilities to retain the waste.

2 THE CHAIRPERSON: I would just  
3 like to note for the record that a copy of the  
4 CD ROM of the comprehensive study has been given  
5 to Commission members at an earlier time and  
6 therefore we have had an opportunity to look at  
7 that. As was stated earlier, the Commission  
8 itself was not involved the process of the  
9 comprehensive review. That is not part of the  
10 CEAA legislation for that.

11 Dr. Barnes.

12 MEMBER BARNES: I would like to  
13 come back to Dr. Simpson's first recommendation  
14 that the provision of an LLW disposal facility for  
15 decommissioning waste be established. This really  
16 comes back I think to the issue of the trenches.

17 I would like a comment from AECL  
18 and staff. Again, correct me if I am wrong here  
19 because I am surprised that this is I think a key  
20 issue in the first phase of decommissioning, but  
21 in all the material that we had, apart from the  
22 material on the CD ROM, there was very little  
23 information actually on the trenches, the size and  
24 scope and so on, as opposed to training and a  
25 whole variety of other issues.

1                   It is my understanding that the  
2 preferred kind of process here from AECL is sort  
3 of to leave, apart from a few of the trenches with  
4 more difficult material, is to leave that in the  
5 ground "until such time as it can be moved",  
6 assuming that there is a national low level waste  
7 disposal facility. One presumes that is not going  
8 to be in Manitoba and would be somewhere in  
9 central Ontario.

10                   If I have a rough calculation,  
11 there is probably 30,000 cubic metres of material  
12 in these trenches. If that is the amount of  
13 material, is it reasonable to expect that if a  
14 national low level waste facility was established  
15 that this sort of volume of material would be  
16 moved from Manitoba to let's say somewhere in  
17 central Ontario? If that is not the case, why  
18 isn't there a process of developing a low level  
19 waste sort of permanent facility along the lines  
20 that Dr. Simpson has outlined here on this site?

21                   THE CHAIRPERSON: There may be  
22 some policy issues which will require AECL to  
23 defer to Natural Resources Canada, or whatever, so  
24 you should be aware of that if that is  
25 appropriate.

1                   I believe Mr. McCauley is with us.  
2           If he could approach the mike. I just want AECL  
3           to know that there is an ability to separate out  
4           the policy decisions of the Government of Canada  
5           versus the AECL policy decisions and programming.

6                   Mr. McCauley, if you could  
7           approach the mike in anticipation of questions.

8                   MR. HELBRECHT: Bob Helbrecht,  
9           former director for decommissioning.

10                   Could I just make a comment on the  
11           low level trenches? The evaluation was to leave  
12           the waste in all but four trenches in situ. It is  
13           not staying in situ to remove it at some future  
14           time. The radionuclide content is largely  
15           strontium-cesium with traces of other materials  
16           and short half lives. The in situ disposal is  
17           based on managing it for a period to which it  
18           decays to background and there is no intention to  
19           move that waste at all.

20                   MEMBER BARNES: So if I can  
21           clarify, the bulk of the material in the trenches  
22           will stay there period, forever.

23                   MR. HELBRECHT: That's right. The  
24           materials that will be moved are the ones that are  
25           in above ground storage and intermediate level

1 wastes which are not appropriate for such  
2 disposal.

3 One other comment that I might  
4 make, we have seen pictures of the Drigg facility,  
5 the concrete vault and the metal containers and  
6 the grouting of those containers. I would just  
7 like to point out that with the Drigg disposal  
8 facility there is an adjacent facility, the first  
9 unit of it, which has 500,000 metres cubed of  
10 waste already contained in trenches very similar  
11 to the environment our waste is in. Second, the  
12 800,000 metres that is planned for the second unit  
13 does not take account of the concrete vault, the  
14 metal containers or the grouting of those  
15 containers in the safety case because for the 500  
16 year safety case for Drigg the vault nor the  
17 containers will last that period. So the safety  
18 case is still built around the geology and the  
19 hydrogeology of the site.

20 THE CHAIRPERSON: Mr. McCauley,  
21 would you like to comment with regard to the  
22 policy considerations in terms of waste disposal  
23 for low level?

24 MR. McCauley: Certainly. Thanks  
25 very much.

1                   Madam Chairman, good morning,  
2           Members of the Commission. My name is David  
3           McCauley. I am a Policy Advisor in the  
4           Radioactive Waste Division at Natural Resources  
5           Canada. You have asked me to comment on the  
6           policy considerations relating to the  
7           establishment of a low level radioactive waste  
8           management disposal facility.

9                   I would just like to comment that  
10          federal policy in this area is based on what is  
11          known as the policy framework for radioactive  
12          waste management that received cabinet approval I  
13          believe it was back in 1996. The basis of that  
14          policy framework is that owners and producers of  
15          radioactive waste are responsible for the  
16          long-term management of these wastes rather than  
17          the federal government. However, timing is an  
18          issue. There are many considerations associated  
19          with the timing of the establishment of a such a  
20          facility, considerations such as safety issues,  
21          economic considerations and the activity of other  
22          waste producers nationally.

23                   I hope that clarifies somewhat  
24          what your concern was.

25                   At this time, the Government of

1 Canada per se is not proceeding with the  
2 establishment of a low level radioactive waste  
3 management facility. That is not one of our  
4 policy priorities at this time. That may change  
5 in the future, but at this time that is not  
6 something we are pursuing right now.

7 Thank you.

8 THE CHAIRPERSON: But if I could  
9 clarify. In terms of who would be responsible for  
10 building this site, would each of the individual  
11 entities' facilities such as -- companies such as  
12 AECL, would they be charged with building the site  
13 under the policy framework of the Government of  
14 Canada?

15 MR. McCauley: That's right. That  
16 is what the current policy is, that waste owners  
17 and producers are responsible for the long-term  
18 management of their wastes. So, for example, in  
19 the consideration of the utilities, the utilities  
20 are moving forward -- the electric utilities, that  
21 is, are moving forward and organizing themselves  
22 in terms of investigating and developing long-term  
23 facilities for the management of their wastes.

24 Similarly, the federal government  
25 has just initiated a process for the establishment



1 of a long-term management facility for historic  
2 wastes in the Port Hope area. Then of course AECL  
3 has a decommissioning plan we are hearing about in  
4 terms of the Whiteshell facility.

5 I wanted to make the point that in  
6 terms of the actual establishment of the facility  
7 timing is a question for which there are many  
8 considerations, including economic considerations,  
9 safety and technical considerations, and what  
10 other producers are actually doing in this area.

11 THE CHAIRPERSON: Mr. Graham.

12 MEMBER GRAHAM: In one of  
13 Dr. Simpson's slides, he had some quite strong  
14 comments in a slide, the overhead, which was "What  
15 is Safe?" I am wondering, he refers to  
16 international consensus, OECD, NEA and IAEA. I  
17 wonder if staff can comment on that? Burying fuel  
18 in ground is not safe. Is that correct?

19 MS MALONEY: I am not sure what  
20 you are asking. Is that statement made?  
21 Certainly we are of the view that the material  
22 that is buried in the ground would have to be  
23 buried safely and we would be looking at -- I  
24 wouldn't agree to a generic statement.

25 I am sorry, I don't have these

1           overheads, so it is difficult to --

2                           THE CHAIRPERSON:   What we will do  
3           is we will make sure you have the overheads.  It  
4           is inappropriate.  These overheads were given at  
5           the last minute by the intervenors and we didn't  
6           realize that you didn't have a copy.  We will give  
7           you a copy right now.

8                           MEMBER GRAHAM:   I am sorry.  I  
9           will proceed then with a question in another  
10          range.

11                          THE CHAIRPERSON:  At this point,  
12          if you can make sure that both the intervenor,  
13          Mr. Secretary, and the licensee have a copy of the  
14          slides.  Then if you could go to another question.  
15          We will come back to that one.

16                          Thank you.

17                          MEMBER GRAHAM:   The material.  
18          There were some strong statements made with regard  
19          to the burial of waste, trench burial, plastic  
20          wrap and so on.  My understanding of this  
21          application today that is before us is that the  
22          very low level waste that is in the ground is not  
23          going to be disturbed until such time as there is  
24          a permanent depository or if it doesn't have to be  
25          removed it will stay there forever.  Is that

1 correct? To AECL or the Whiteshell people.

2 DR. FEHRENBACH: Paul Fehrenbach,  
3 AECL. Yes, that's correct.

4 MEMBER GRAHAM: My next question  
5 is regarding the highly contaminated material. Is  
6 that highly contaminated material going to be put  
7 in a trench or is that highly contaminated  
8 material going to be put in canisters?

9 MR. KUPFERSCHMIDT: I will  
10 redirect to Bob Helbrecht. Bob.

11 MR. HELBRECHT: Bob Helbrecht.  
12 Former director for decommissioning.

13 There is no fuel buried in  
14 trenches at Whiteshell. There is some irradiated  
15 fuel stored in standpipes which are concrete  
16 cylinders installed in that soil environment.

17 Those are planned for remediation  
18 early in Phase 2. The reason it is Phase 2 is  
19 because there is a significant planning and  
20 development activity to prepare the tools and the  
21 materials required to retrieve and repackage and  
22 store it. It would be placed in above ground  
23 storage similar to fuel storage facilities at  
24 Whiteshell now.

25 MEMBER GRAHAM: But at the present

1 time it is in canisters. Is that correct?

2 MR. HELBRECHT: Most of the fuel  
3 at Whiteshell, 28 metric tonnes, is in canisters:  
4 25 metric tonnes is in concrete storage canisters;  
5 roughly three metric tonnes is in what I referred  
6 to as the tile holes. Instead of being an above  
7 ground canister structure they are in fact a  
8 concrete shaft in the soil like a well about 10  
9 feet deep. There is material in those.

10 We acknowledge that that material  
11 cannot remain in its current storage location  
12 until disposal is available and we are planning  
13 now for how we will remove it, process it,  
14 repackage it and place it in canister storage.

15 MEMBER GRAHAM: But it will be  
16 repackaged and put in canister storage. There is  
17 the material that is in canister storage -- and I  
18 am sorry if I am taking a little time on this  
19 because I didn't understand it quite as clearly as  
20 some people -- there is the material that is in  
21 canister storage that is highly radioactive.  
22 There is also material that is in tubes  
23 underground that will have to be removed in  
24 Phase 2 and put into other canisters. There is  
25 material that is in trenches in the ground that

1 will not be disturbed.

2 Is there material that will be put  
3 into trenches until there is a further depository  
4 found somewhere in Canada? Is there going to be  
5 material and how much material is that we are  
6 talking about?

7 MR. HELBRECHT: There is no  
8 additional material that will be placed in  
9 trenches. Use of trenches for waste storage was  
10 discontinued in 1986. Since that time all low and  
11 intermediate waste has been accommodated in either  
12 above ground low level waste bunkers, in  
13 standpipes or concrete canister storage  
14 facilities.

15 MEMBER GRAHAM: So the material  
16 that is being referred to by Dr. Simpson is  
17 material that was put in trenches prior to 1986.  
18 Is that what you are saying?

19 MR. HELBRECHT: That's right.

20 MEMBER GRAHAM: In the  
21 decommissioning, Phases 1, 2 or 3, will that  
22 material that was put in trenches be removed?

23 MR. HELBRECHT: only from four  
24 trenches. Those are the four trenches that are  
25 identified as having material not suitable for

1           in situ disposal either because the radionuclide  
2           content has a half life that would require  
3           management for a much longer period than we  
4           propose for the trenches or non-radiological  
5           wastes that are similarly not suitable for in situ  
6           disposal.

7                           MEMBER GRAHAM:   Is that the 30,000  
8           cubic metres?  It was referred to this morning in  
9           several instances of approximately 30,000 metres.  
10          Is that the material that has to be worked with  
11          during the decommissioning?

12                           MR. HELBRECHT:  Without having the  
13          tables in front of me I will try to give you an  
14          assessment of just what the amounts are.

15                           We have low level waste in storage  
16          in the waste management area in trenches of 21,000  
17          metres cubed.  We have an additional 10,400 that  
18          we believe will be produced over the phases of  
19          decommissioning, plus 2,000 from non-nuclear  
20          buildings in the same category.

21                           So the total low level volume at  
22          the site is 33,400.  Of that 33,400, roughly half  
23          is expected to stay in situ disposal in trenches  
24          where it is already located.  The only thing that  
25          would be done with that waste is there are

1 additional evaluations of the hydrogeological  
2 environment to confirm that transport is as the  
3 feasibility study indicated and there may be some  
4 capping and drainage patterning around it to avoid  
5 water pooling over those areas, for example, as  
6 part of the long-term storage.

7 MEMBER GRAHAM: A question then.  
8 You talked about 21,000, that is prior to 1986, I  
9 would presume, and 10,000 new that will be  
10 developed under the decommissioning. The 10,000  
11 new, what are you going to do with that, put that  
12 in trenches?

13 MR. HELBRECHT: No. As I said  
14 earlier, there is nothing additional being  
15 transferred to trenches. The plan for the 10,400  
16 is the decommissioning of the above ground storage  
17 facilities in the waste management area and what  
18 comes out of the decommissioning of the nuclear  
19 facilities. All of it is planned for transfer to  
20 an off site disposal facility when one is  
21 available in the future.

22 MEMBER GRAHAM: But at the present  
23 time there is nothing available. What will be  
24 done with it in the -- because we are talking the  
25 next six years, or a licensing period requested

1 for six years, what will happen to that 10,400  
2 cubic metres of new material as it becomes  
3 available in the short term?

4 MR. HELBRECHT: I am still not  
5 making myself entirely clear.

6 The amount of material, the amount  
7 of low level waste, or intermediate level waste  
8 that is produced during Phase 1 is very small. In  
9 fact, the waste production from the shutdown  
10 operations is larger than that. It consists of  
11 something probably less than 1,000 metres cubed.

12 The material to be moved is made  
13 up of material already in storage at our waste  
14 management facilities in low level storage bunkers  
15 produced as part of the routine operations of the  
16 site. When I refer to new waste that has to be  
17 moved off site, I am referring to that material in  
18 storage in bunkers now.

19 So the overall production from  
20 Phase 1 will be accommodated in additional above  
21 ground structures at the Whiteshell waste  
22 management area, but it is a relatively small  
23 volume compared to what was produced during the  
24 operational period and what is there now.

25 MEMBER GRAHAM: If I may, I don't



1 want to prolong the questioning, but --

2 THE CHAIRPERSON: Just one more  
3 clarification then I will let you go on to your  
4 next question.

5 MEMBER GRAHAM: The 10,400 metres,  
6 which is in bunkers on site which have to be moved  
7 around because there is demolition and so on, you  
8 talked about it as new but it is not really new it  
9 is existing, will it be put in canisters? What  
10 happens to that material that is in bunkers now  
11 and buildings that may be demolished and so on?  
12 What are you doing with that? I guess that is the  
13 question. You say it has to be held until an off  
14 site repository is found, but in the interim what  
15 happens to it?

16 MR. HELBRECHT: The facilities  
17 within which it is contained now have an adequate  
18 lifetime to more than meet our assumptions for  
19 planning the project for waste disposal  
20 availability. So there is no moving around of the  
21 waste that is in storage other than the few  
22 locations that are already identified as being  
23 inappropriate to meet the waste disposal time  
24 frames. Those do not relate to the level by and  
25 large. They relate to the fuel wastes in

1 standpipes.

2 The only movement of waste  
3 material on the site during Phase 1 is what comes  
4 out of decontamination of facilities, the  
5 laboratory facilities, and is stored in bunkers at  
6 the waste management area as additional waste  
7 produced by the Phase 1 decommissioning.

8 MEMBER GRAHAM: So there is no new  
9 material going in trenches which comes to the  
10 questions I had with regard to what is safe and  
11 the burying of fuel in the ground is not safe,  
12 trench burial is no longer acceptable and so on,  
13 you will not be doing any more of that as new  
14 activities. What is there will remain there, but  
15 you are not putting anything there as new  
16 activities. Is that correct?

17 MR. HELBRECHT: We are not putting  
18 any in the ground as part of new activities and  
19 there are some areas that will be retrieved,  
20 recovered and placed in enhanced storage because  
21 they are not appropriate in the spot they are in  
22 now.

23 THE CHAIRPERSON: I believe,  
24 Mr. Graham, you started out by asking staff for  
25 their comments. If I could be quite specific, in

1 the slide that says "What is Safe?" the last two  
2 items refer to knowledge and staff issues. The  
3 first three practices at the beginning, I think  
4 you had the tone of Mr. Graham's question. Could  
5 you comment so that we could have your views for  
6 the record?

7 DR. SIMPSON: Madam Chairman,  
8 could I save you some time?

9 THE CHAIRPERSON: No. I  
10 specifically address this to the staff. Thank  
11 you, Dr. Simpson.

12 DR. SIMPSON: I think you will  
13 find I agree with everybody.

14 THE CHAIRPERSON: I just think it  
15 is really important that this is now going to be  
16 part of the public record. We will ensure that  
17 these slide sets and the other slide sets from the  
18 intervenors are part of the public record, and it  
19 is really important that we have these comments,  
20 so thank you very much but I will ask the staff  
21 for their views.

22 MS MALONEY: It is Cait Maloney  
23 for the record. I now have the overheads in front  
24 of me. Thank you.

25 The hesitation I had, Mr. Graham,

1 was when looking at the words "burying fuel in the  
2 ground is not safe", I think it is unfair to  
3 conclude that that is an international consensus  
4 because of course we are looking for repositories  
5 which will be, in effect, burying fuel in the  
6 ground. So I think it is unfair to agree to that  
7 as a general statement.

8                   However, if we want to talk about  
9 the specifics of the concern of storing fuel in  
10 tile holes, I would like to ask Dr. Thompson to  
11 comment on that and the trench burial and other  
12 areas there that were considered in the  
13 comprehensive safety study report. Then I will  
14 ask Mr. Howden to make a brief comment on  
15 activities if this licence is granted.

16                   DR. THOMPSON: Good morning again.  
17 Patsy Thompson for the record.

18                   I will just maybe review the  
19 process that was followed in conducting the  
20 environmental assessment and agreeing that the low  
21 level waste in trenches could remain there, but  
22 there were certain conditions attached to that.

23                   When the first draft of the  
24 environmental assessment comprehensive study  
25 report was given to us we had a lot of technical

1 issues with the data provided to support the case  
2 of leaving the waste in trenches.

3 In response to those technical  
4 issues, AECL conducted additional work around the  
5 trenches. That work is reported in an appendix to  
6 the comprehensive study. Essentially, the work  
7 showed that the waste that was in trenches, the  
8 integrity of the material had remained intact and  
9 there was no migration of radionuclides or other  
10 contaminants away from the trenches and  
11 essentially no contamination of soil or of  
12 groundwater around the trenches.

13 In relation to the issue of the  
14 ability of the trenches to contain the material  
15 over the long term, since the plan was to leave  
16 some of the material in place as a permanent  
17 solution, the follow-up program that is required  
18 as part of the proposed licence has elements where  
19 AECL has been asked to develop a program to assess  
20 the fitness for service, if you want, of that  
21 proposed solution. There is a program that  
22 includes groundwater monitoring and other studies  
23 to ensure that the material remains contained.

24 If the monitoring data that will  
25 be collected as part of the follow-up program

1 would show that the material is not being  
2 contained, then obviously there would be a  
3 requirement to deal with that material because  
4 then the trenches would not be operating as they  
5 were planned. So there is a process in place to  
6 make sure that the trenches are monitored and if  
7 they are not behaving as planned, then there will  
8 be a requirement to address those issues.

9 MR. HOWDEN: Barclay Howden  
10 speaking.

11 Following the environmental  
12 assessment, as Dr. Thompson has said, a follow-up  
13 program was specifically stated as a requirement,  
14 that the responsible authority should be following  
15 up on. As such, we had AECL develop this  
16 follow-up program which has been developed and is  
17 specifically referenced in the licence. So this  
18 is just to show a link from the EA to the  
19 licensing process.

20 Basically, Dr. Thompson has  
21 outlined some of the things that are in the  
22 follow-up program, but I think one of the key ones  
23 during Phase 1 is the assessment of the fitness  
24 for service of the waste management area  
25 facilities to make sure that they are functioning

1 and are able to function. If they cannot, another  
2 one of the work packages is actually the  
3 remediation work which has already been stated.  
4 Certainly, the fuel that is stored in the tile  
5 holes right now will be coming out of the tile  
6 holes.

7 THE CHAIRPERSON: I would like to  
8 just comment, since I am also the CEO of the  
9 organization as well as the President of the  
10 Tribunal, on the comment that was made by  
11 Dr. Simpson in terms of the CNSC record. There  
12 are two parts to our record of holding licensees  
13 to commitments. One part of that is the ongoing  
14 compliance program that the CNSC staff performs on  
15 a continuous basis for the licensees.

16 If you, Dr. Simpson, or anyone  
17 else has a particular complaint with regard to how  
18 the staff do specific work, that should be  
19 addressed to the Vice-President of Operations, Ken  
20 Pereira, who is in this room, in terms of how the  
21 staff actually do the work in this case if you  
22 have some specific complaints.

23 If you have a specific instance  
24 where you feel that the CNSC Commission, i.e. the  
25 Tribunal that is before you today, has not gone

1 forward in a manner that is appropriate from your  
2 point of view in terms of the terms of reference  
3 of the Tribunal, you may address those comments to  
4 me in writing or by e-mail directly to the CEO of  
5 the organization, to my attention, and I will  
6 consider them with all due seriousness.

7 Comments of this kind are very  
8 important to us to understand not in general ways  
9 but in specific ways so that we can address them  
10 and continuously improve as an organization, so  
11 please do that.

12 This part of the questioning for  
13 this intervenor is closed. It is now about --

14 DR. SIMPSON: Madam Chairman, may  
15 I make just a closing statement?

16 THE CHAIRPERSON: If the closing  
17 statement is, as you have already been more than  
18 generously allowed time, of a couple of minutes  
19 please.

20 DR. SIMPSON: I recognize that.  
21 On the what is safe issue, had I had a little more  
22 time upfront we probably could have saved about  
23 half an hour.

24 But just in closing, basically  
25 what we want is if you can get this low level



1 waste facility under construction very, very soon  
2 I think everything else will fall into place.  
3 That's all.

4 THE CHAIRPERSON: Thank you.

5 We will now take a 10 minute  
6 break. It is approximately 10:50. We will come  
7 back at 11 o'clock. Could you be in your seats  
8 promptly at 11:00, thank you, and we will continue  
9 with the intervenors.

10 The next intervenors' slides are  
11 in the front of the facility.

12 --- Upon recessing at 10:50 a.m.

13 --- Upon resuming at 11:00 a.m.

14

15 **02-H19.4**

16 **Oral presentation by the Manitoba Whiteshell**  
17 **Laboratories Technical Advisory Committee**

18 THE CHAIRPERSON: The next  
19 intervention is from Manitoba Whiteshell  
20 Laboratories Technical Advisory Committee as  
21 outlined in CMD Document 02-H19.4. I would call  
22 on Mr. Edwin Yee who is the chairperson of this  
23 committee for your comments.

24 Welcome, Mr. Yee.

25 MR. YEE: Thank you, Madam

1 Chairman, Members of the Commission, ladies and  
2 gentlemen.

3 As noted, I am presenting this on  
4 behalf of the Manitoba Technical Advisory  
5 Committee. For those in attendance that are not  
6 familiar with this group, essentially it  
7 represents several provincial government  
8 departments that are providing input into the  
9 Whiteshell Laboratories decommissioning.

10 I would beg the indulgence of the  
11 Commission in that we are cognisant that this is a  
12 hearing that is looking at Phase 1, a six year  
13 licensing term, but we certainly feel that by  
14 issuing this licence you are concurring with the  
15 60 year plan, which we feel is inappropriate. So  
16 I would certainly like to also mention those  
17 facts. I won't dwell on them where it has already  
18 been touched on. I will try and be as expedient  
19 as possible.

20 Looking at a comparison with the  
21 Tunney's Pasture decommissioning, the Tunney's  
22 Pasture decommissioning took 10 years. It  
23 included a three year storage period. We raise  
24 this because we were aware of it; the technical  
25 advisory committee had discussed this. We had

1 mentioned that we had not received a specific  
2 response to this comparison in some of our  
3 comments that we had made with respect to the time  
4 frames between Tunney's Pasture and what is being  
5 proposed with the decommissioning of the  
6 Whiteshell Laboratories.

7 I draw this to your attention  
8 specifically because in your former self as the  
9 AEBCB, the Atomic Energy Control Board, your  
10 conclusion was that the successful completion of  
11 the project in an urban environment, particularly  
12 subject to external scrutiny, should provide  
13 Canadians with the confidence that other nuclear  
14 decommissioning undertakings can and will be  
15 similarly conducted and concluded anywhere in  
16 Canada.

17 Again, I harken back to these time  
18 frames which are significantly different.

19 We the TAC would prefer to see,  
20 and we totally agree with the AEBCB's conclusion at  
21 the time, that this is appropriate and that we  
22 would like to see a consistent approach to  
23 decommissioning in Canada.

24 We also looked at, during the CEAA  
25 process, the Canadian Environmental Assessment

1 Agency process, other submissions and of course we  
2 as a technical advisory committee looked at those  
3 and the comments that were made through revision  
4 one and revision two of the comprehensive study  
5 report. Of these we were noting that the  
6 monitoring and surveillance data in OECD countries  
7 do not leave redundant nuclear sites in a closed  
8 and monitoring surveillance state. I think that  
9 is of significance and we should pay some  
10 attention to these international standards.

11 As well, we looked at the  
12 decommissioning time frame that was earlier  
13 mentioned by Mayor Simpson with respect to some of  
14 the OECD countries. It has recently been brought  
15 to my attention, looking at a few of these  
16 countries, the time frame seems to be within the  
17 10 to 15 year period for decommissioning of  
18 facilities versus the 60 year decommissioning  
19 proposed for the Whiteshell Laboratories.

20 In particular, it was already  
21 mentioned in the United Kingdom, one of the things  
22 noted in one of the documents that I had read, was  
23 that decommissioning should occur as soon as  
24 possible. I think that has to do with the  
25 competency of the staff and the available

1 information that would assist in the  
2 decommissioning of these facilities.

3           Going back to statements that were  
4 made earlier that the Commission had asked  
5 questions on with respect to appropriate  
6 management of waste materials, again we concur  
7 that vitrification of radioactive liquids is a  
8 reasonable standard and that we would like to see  
9 that be a consistent approach with respect to the  
10 Whiteshell Laboratories decommissioning.

11           When we talked about responsible  
12 management, the TAC felt that really a 60 year  
13 decommissioning proposal was not responsible  
14 management, it doesn't represent responsible  
15 management. I will try and give you some idea of  
16 the rationale behind that conclusion that the TAC  
17 came to. We feel that there certainly would be a  
18 loss of skilled and experience people. I mean we  
19 are delaying this essential six decades and I am  
20 really concerned about continuity here.

21           Speaking as just a general  
22 individual, I have concern over institutional  
23 memory and I know I realize that AECL are putting  
24 everything down in writing and will document  
25 everything well as they go through their phases,

1 but I don't know if it is appropriate to rely that  
2 much on institutional memory.

3 As far as continuity goes, if we  
4 look at it on a personal level, I myself will not  
5 be here in 2004 because I am retiring representing  
6 the province. I know Bob Helbrecht is  
7 semi-retired and many of the questions were  
8 referred this morning to Bob Helbrecht. So again,  
9 I point this out to the Commission, that there are  
10 going to be a loss of skilled and experienced  
11 people that are very familiar with this facility.

12 Also, there is the opportunity to  
13 develop decommissioning expertise here in Canada.  
14 I think it is the responsibility of the Government  
15 of Canada to look at all these facilities right  
16 across the country. Certainly, as I would say,  
17 this is somewhat the tip of the iceberg.  
18 Whiteshell Laboratories being a research facility,  
19 there are many power reactors and other facilities  
20 across this county that will eventually need to be  
21 decommissioned. I think we should set a  
22 reasonable precedent as well as develop that  
23 capability in Canada to deal with our issues.

24 The availability of financial  
25 resources and scientific expertise, again I harken

1 back to the 60 year time frame and in addition to  
2 this is a 200 year of monitoring and surveillance  
3 program associated with it. That is an inordinate  
4 length of time. I have yet to see really the  
5 financial resources and commitment to this.

6 I guess in association with this,  
7 the realistic aspect of it is there will be  
8 changes and political decisions and policies.  
9 Over the 60 year decommissioning time frame, how  
10 many changes in government will we have and what  
11 will the direction of government be during these  
12 time frames?

13 With respect to the agreement  
14 between Manitoba and AECL, I want to make the  
15 Commission aware that we do have confidence in the  
16 expertise and operating skills of AECL, so I don't  
17 want you to misunderstand that we are concerned  
18 about the capability of AECL in managing their  
19 waste. However, again I harken back to the  
20 lengthy time frame that this decommissioning  
21 process will take. Again, I talk about the loss  
22 of expertise, the continuity that we are concerned  
23 about.

24 We are opposed to the long-term  
25 storage of nuclear waste in Manitoba, specifically

1 high level. This you have probably may have  
2 noted. We have passed legislation saying that you  
3 cannot store high level nuclear waste in Manitoba.  
4 I just want to make this clear, that we have a  
5 long-standing policy with respect to this. We do  
6 appreciate that any operating facility generates  
7 waste and at the time of our agreement with AECL  
8 we appreciate that waste would have to be stored  
9 on site, but again we have confidence in the AECL  
10 staff and their procedures to look after it.

11 We are however concerned over the  
12 60 year time frame as representing quasi-permanent  
13 storage as well as the loss of this experienced  
14 staff and the ability to properly maintain storage  
15 and the monitoring capability.

16 I would also draw upon the  
17 principles of sustainable development and again  
18 ask the Commission to consider is this really  
19 sustainable development when we talk about  
20 decommissioning over more than three generations  
21 of people, 60 years. We are leaving a legacy of  
22 decommissioning not to our generation but to  
23 future generations. I think it is really  
24 incumbent upon ourselves to really address the  
25 issues at hand with the resources that we have



1 available.

2 I would also like to draw your  
3 attention to the social and economic benefits  
4 liabilities that the TAC had discussed. We feel  
5 there is an increased liability with the storage  
6 of nuclear materials again going back to the loss  
7 of local expertise and again to the commitment of  
8 long-term monitoring and surveillance, and the  
9 financial funding required.

10 We have not seen any details of  
11 the long-term monitoring and surveillance,  
12 although it has been alluded to. We would like to  
13 know: what does it mean; how many monitoring wells  
14 are going to be in existence; how are they going  
15 to be maintained; how are they going to be  
16 monitored; are they going to be monitoring the  
17 plume of radiological isotopes that are currently  
18 in the sediments of the Winnipeg River? All of  
19 these questions have not been answered to our  
20 satisfaction.

21 We look at the storage of nuclear  
22 waste at a facility that was originally designed  
23 as a research facility. Again, we are concerned  
24 that it is no longer in an operation mode, it will  
25 be in a shutdown, monitored and surveillance mode

1 with minimum staff. Again, we need some  
2 assurances over the long haul if you were to  
3 accept this long 60 year decommissioning process  
4 that there is that capability and financial  
5 commitment in place to ensure the protection of  
6 Manitoba health and environment.

7 As well, the social risks have not  
8 been considered during the environmental screening  
9 risk assessment process. I draw your attention to  
10 not the fact that it is the Government of Canada's  
11 decision to decommission but really the social  
12 risks we are concerned about are the risks over  
13 this long-term decommissioning. You will have to  
14 understand, and I am sure you appreciate the term  
15 that perception is often reality, that if you are  
16 spending six years to decommission a facility,  
17 over that 60 year period do people have confidence  
18 in using these "brownfields" or for that matter  
19 "greenfield" that are adjacent to the active sites  
20 as viable development areas.

21 Again, I think it does impact on  
22 the socio-economic values in the community.

23 I would look at the contamination  
24 of the Winnipeg River sediments. We had noted and  
25 not received a satisfactory response from our

1           comments that non-radiological contaminants were  
2           not assessed. If you look at the documentation,  
3           both versions of the CSR document, you will notice  
4           there are contaminants such as arsenic and other  
5           organic solvents and materials that were  
6           identified as being released at this facility yet  
7           there was no assessment made of these.

8                         I would also draw your attention  
9           to the fact that the CEAA process is a screening  
10          level assessment, not a full scale assessment, and  
11          that it did not consider a specific site risk  
12          assessment as to pathway receptors and potential  
13          impact to those receptors.

14                        Again, without dragging this out  
15          too lengthy here, I would reiterate my comment  
16          that there needs to be this commitment to  
17          continued monitoring. I think we need to know the  
18          extensive nature of the monitoring, the frequency  
19          of the monitoring and the financial commitment to  
20          that monitoring. Again, that was my next point  
21          with respect to financial and technical  
22          commitment.

23                        We have not seen anything with  
24          respect to a detailed monitoring plan. We would  
25          certainly like to see that. Again, the concern is

1           this lengthy decommissioning period of 60 years  
2           and monitoring for 200 years after that.

3                         Again, I would reiterate the  
4           appropriateness of a screening assessment  
5           conclusion that there are no significant impacts  
6           to the environment when we know that there is a  
7           plume of radiological isotopes and we don't know  
8           what non-radiological contaminants are in the  
9           Winnipeg River sediments. Although the CSR has  
10          done a good job in a picture and time of looking  
11          at a site characterization. We feel that in  
12          areas, especially the Winnipeg River contaminants,  
13          this plume will migrate and move and extend to a  
14          larger area. What further impacts will be caused  
15          from this and would they be significant we don't  
16          know, and is there going to be a continued study  
17          of this.

18                        I would finally end off by saying  
19          that the decision of the Canadian Environmental  
20          Assessment Act process was not acceptable to the  
21          technical advisory committee on the principle that  
22          first of all it wasn't a full scale assessment, it  
23          is a screening level assessment, and that they  
24          failed to conduct any public hearings in Manitoba.  
25          The decision was to defer it to the CNSC public

1 hearing process.

2 I ask you that when you stop and  
3 think about this we are talking in terms of if you  
4 accept issuing a licence to AECL you are issuing a  
5 licence for a program that will take 60 years to  
6 decommission and 200 years of monitoring and  
7 surveillance. For me as a Manitoban that is  
8 significant and I think other Manitobans would  
9 like some input into this process.

10 We feel strongly that there should  
11 be an opportunity for Manitobans to participate in  
12 a public hearing process. I think it would be  
13 beneficial for all Canadians.

14 With this I would like to thank  
15 you, Madam Chair and Members of the Commission,  
16 ladies and gentlemen.

17 THE CHAIRPERSON: Thank you very  
18 much, Mr. Yee.

19 I just would like to clarify a  
20 technical point before we open the floor for  
21 questions. That is with regard to the level of  
22 screening that was held under CEAA. I would just  
23 note that, as I mentioned at the beginning, this  
24 is not a hearing to talk about CEAA or the  
25 screening. This has got a very specific reason, a

1 very specific issue, which is the application by  
2 AECL for a decommissioning licence.

3 I would just like to ask staff for  
4 a clarification of what the level of screening was  
5 because I think that would be important before we  
6 start questioning.

7 MS MALONEY: It is Cait Maloney.

8 The screening that was done was a  
9 comprehensive study because the project is one  
10 that is named on the comprehensive study list  
11 under the Canadian Environmental Assessment Act.

12 THE CHAIRPERSON: My understanding  
13 is the screening is a different level of  
14 assessment and that was --

15 MS MALONEY: It's a different --

16 THE CHAIRPERSON: So it was not a  
17 screening.

18 MS MALONEY: It was not a  
19 screening. A screening is a different type, not  
20 necessarily a different level. That's right.  
21 Screenings are the purview of the Commission.  
22 Comprehensive studies are the purview of the  
23 Environmental Assessment Agency and the Minister  
24 of Environment.

25 THE CHAIRPERSON: Thank you very

1 much.

2 I will open the floor for  
3 questions from Commission members. Dr. Giroux.

4 MEMBER GIROUX: Just one question.  
5 In the comprehensive study process, and I am  
6 addressing this to Mr. Yee, there are documents  
7 which are produced and which are sent out for  
8 consultation. I think you had the occasion to see  
9 those documents and to comment on them. Did they  
10 not contain monitoring plans for the  
11 decommissioning facility enough that a decision  
12 can be made?

13 I think I heard you say that you  
14 would like to see detailed monitoring plans.  
15 Could you tell me what level of detail you  
16 received and what more you would want?

17 MR. YEE: Yes. Edwin Yee with  
18 Manitoba Conservation.

19 Yes, I concur. In fact, I would  
20 draw your attention to AECL's presentation where  
21 they have shown the source of comments. Manitoba  
22 Conservation Technical Advisory Committee:  
23 Revision 1 had 79 comments, Revision 2 had 51. We  
24 are not totally satisfied with the response we got  
25 to our comments. We felt that again although the

1 CSR documents were very well put together, they do  
2 provide a certain level of detail, they were not  
3 specific in terms of -- they mentioned future  
4 monitoring of the Winnipeg River sediments, but  
5 there was no details on what level of monitoring  
6 this would entail, especially in terms of whether  
7 they would look further in terms of risk  
8 assessment, potential pathways and receptors and  
9 if there would be potential impacts. If they  
10 would take that one step further.

11 That is one of the things that was  
12 missing in the CEA process. When you do an  
13 assessment you characterize what is out there, you  
14 look at the contaminants, but you don't  
15 necessarily run a risk assessment: is there  
16 pathways; will there be an impact to certain  
17 organisms? That wasn't undertaken.

18 MEMBER GIROUX: Thank you. Would  
19 staff comment on that?

20 MS MALONEY: It is Cait Maloney  
21 here.

22 Certainly I would expect that type  
23 of -- not I would expect, it will be part of the  
24 licensing regime, the monitoring program. I would  
25 note that the technical advisory committee is part



1 of our joint regulatory group and will be involved  
2 in the ongoing regulatory activities at the site.

3 I would ask Dr. Thompson to  
4 comment a little bit more, if I may.

5 DR. THOMPSON: Good morning.  
6 Patsy Thompson for the record.

7 What I can do is describe the  
8 process that CNSC staff go through in approving  
9 environmental or effluent monitoring programs that  
10 are submitted by a licensee or a proponent.  
11 Essentially, what we do is we have identified  
12 requirements for environmental monitoring programs  
13 as well as requirements for an environmental  
14 management system. Those requirements are  
15 identified in the regulations for Class 1  
16 facilities and those requirements cover a  
17 decommissioning phase.

18 The requirement is for the  
19 proponent to identify the sources of contaminants,  
20 radioactive and hazardous contaminants from the  
21 facilities on site to develop a monitoring program  
22 to verify that those estimated sources are  
23 appropriate and to conduct an ongoing effluent  
24 monitoring program.

25 There is also a requirement and

1 the comprehensive study report has provided some  
2 of that information for the proponent to identify,  
3 once these sources are released into the  
4 environment, we know where the contaminants are  
5 going into the environment, what the potential  
6 effects are, and there is a requirement to design  
7 the environmental monitoring program to cover the  
8 significant areas where contaminants are likely to  
9 accumulate and to focus on biota that may be  
10 exposed by those contaminants in those areas.

11 So we look to ensure that those  
12 elements are indeed in the monitoring program.  
13 There is a requirement for data quality as well as  
14 data management, and there is a requirement for  
15 the licensee to take action if the monitoring  
16 results, either effluent or environmental  
17 monitoring results, indicate that the significance  
18 of the data is different from that which we  
19 expected.

20 In general, there is a requirement  
21 for the licensee to report to us the data as well  
22 as the interpretation and staff verify that the  
23 data has been well-interpreted. If we were to  
24 find that essentially the environmental components  
25 are not behaving as we anticipated in the

1 comprehensive study report, there would be a  
2 requirement for the licensee to take action,  
3 either look at sources to try to define them  
4 better or take additional mitigation or remedial  
5 action if necessary.

6 But there is a process in place to  
7 ensure that the environmental protection programs  
8 are well managed and that the licensee takes  
9 action if things are not going according to plan.

10 MEMBER GIROUX: Summarizing in a  
11 way, Phase 2 monitoring would be subject to the  
12 Phase 2 licensing and you will be looking at  
13 detailed plans at that time and those plans would  
14 be public. Is that correct?

15 DR. THOMPSON: The plans that are  
16 being developed for Phase 1 are public. They have  
17 been reviewed in some detail and other plans will  
18 be forthcoming.

19 A lot of the data that is being  
20 collected through the follow-up program in Phase 1  
21 is necessary to develop the programs that will be  
22 needed for Phase 2. Once we have that information  
23 then the future programs will be reviewed in light  
24 of that data.

25 THE CHAIRPERSON: Dr. Barnes.

1                   MEMBER BARNES: As a follow-up  
2 comment, some of that data would be available in  
3 what you propose as a mid-program review I think  
4 after three years.

5                   MS MALONEY: Yes, it would.

6                   MEMBER BARNES: Just two  
7 clarifications, if I could, on material that has  
8 been raised here and also elsewhere in the  
9 documents before us today. Maybe from staff.

10                   The issue of socio-economic  
11 conditions being excluded from the EA, which is a  
12 fair debate here, was that excluded?

13                   MS MALONEY: As I had said  
14 earlier, the confusion has arisen because of the  
15 definition of the project that is before us for  
16 your consideration. What you are looking at now  
17 is the -- what was considered in the CSR was the  
18 socio-economic impact of the decommissioning  
19 activities, and those were addressed in the CSR.

20                   MEMBER BARNES: Maybe a  
21 clarification from AECL.

22                   Again, it has come up here and I  
23 think it came up in Dr. Simpson's point, the  
24 business of vitrification of radioactive materials  
25 versus using concrete where it would be difficult

1 to extract radioactive materials in the long term.  
2 Could you give us a comment, your views on that;  
3 staff, if they wish to?

4 MR. KUPFERSCHMIDT: Bill  
5 Kupfershmidt, Atomic Energy of Canada Limited.

6 I guess I would open by saying  
7 that we believe that cementation is a suitable  
8 means to stabilize liquid waste for safe interim  
9 storage. I would also add that although  
10 vitrification is used in various countries, it is  
11 not the only process that is deemed appropriate  
12 for liquid waste.

13 For example, in the case of the  
14 U.K., the U.K. AEA is intending to encapsulate all  
15 of their radioactive sludges, liquids, powders in  
16 concrete using a high level fission product from  
17 reprocessing material test reactor fuel. Their  
18 original plan had been to vitrify the latter  
19 waste, but they have recently concluded that  
20 cementation is suitable.

21 MEMBER BARNES: In discussions  
22 with AECL, and you will rule this question out of  
23 order if it is too much, presumably AECL is  
24 looking at this as a policy matter with a number  
25 of sites and so on, the vitrification versus

1 alternative methods, the one you just mentioned,  
2 so encasing in concrete is something which you see  
3 as entirely appropriate.

4 MR. KUPFERSCHMIDT: Again, we  
5 believe it is something that is suitable for  
6 interim storage. I would also note that we are  
7 certainly also looking into the matter with regard  
8 to vitrification with regard to other projects  
9 that we have at our Chalk River Laboratories, so  
10 vitrification is certainly something that we are  
11 also looking into.

12 But with regard to this specific  
13 question, we do believe it for disposal but we do  
14 believe that cementation is an appropriate process  
15 to be followed for interim storage.

16 MEMBER BARNES: Any response by  
17 staff?

18 MR. HOWDEN: Barclay Howden  
19 speaking.

20 For this particular case at  
21 Whiteshell, the volume is equivalent to about two  
22 and a half 45-gallon drums for volume. From our  
23 point of view, moving it from a liquid form to a  
24 solid form is a much safer thing to do than  
25 maintain it in liquid with the sedimentation with

1 storage in an above-ground bunker.

2 In terms of alluding to  
3 vitrification at Chalk River, that is not  
4 available now and probably won't be for eight to  
5 ten years.

6 In our understanding, there is a  
7 project started by AECL, but we have not received  
8 any regulatory application for that particular  
9 project.

10 THE CHAIRPERSON: Dr. McDill.

11 MEMBER McDILL: Thank you.

12 Mr. Yee brought up questions with  
13 respect to Tunney's Pasture. To help me  
14 understand the similarities and differences, I  
15 have several questions.

16 What is the acreage affected in  
17 the two areas, Tunney's Pasture acreage and  
18 Whiteshell?

19 What is the watershed affected?  
20 Both are on rivers.

21 What are the volumes of low,  
22 medium and high-level waste associated with the  
23 two sites?

24 MR. KUPFERSCHMIDT: Bill  
25 Kupferschmidt, Atomic Energy of Canada Limited.

1                   I will attempt to answer some of  
2 those questions, and then I will need to bring in  
3 some technical expertise to assist me in providing  
4 some additional details.

5                   The first point I would make is  
6 that Tunney's Pasture has a relatively small  
7 volume of waste associated with it, something in  
8 the neighbourhood of 600 cubic metres of waste  
9 generated during the decommissioning of Tunney's  
10 Pasture.

11                  I would note that what we are  
12 looking at with regard to the Whiteshell  
13 decommissioning is something in the neighbourhood  
14 of 20,000 cubic metres of waste from  
15 decommissioning.

16                  So the volumes that we are talking  
17 about are really dramatically different.

18                  I would also note that the  
19 Tunney's Pasture laboratory was a relatively  
20 simply decommissioning project, very small,  
21 comparatively speaking, compared to  
22 decommissioning of a nuclear site.

23                  So the comparisons between  
24 decommissioning of Tunney's Pasture and the  
25 decommissioning of the Whiteshell Laboratories is



1 a very significant change in scale.

2 With regard to some of the other  
3 questions, I will redirect the question to Bob  
4 Helbrect.

5 MR. HELBRECT: Bob Helbrect,  
6 former Director for WL decommissioning.

7 The size of the Whiteshell site is  
8 roughly 10,500 acres. I am guessing at Tunney's  
9 Pasture, but I think one single building on about  
10 two acres, one or two acres. So a very small site  
11 with one building on it compared to Whiteshell  
12 being 10,500.

13 Whiteshell's watershed, of course  
14 it impacts, if it has releases, on the Winnipeg  
15 River. I can't comment on watershed for -- well,  
16 I guess it would be the Ottawa River.

17 How far is it? The Ottawa River  
18 watershed, I don't know if there are actual  
19 impacts or releases to it during this operation.

20 MEMBER McDILL: The 600 cubic  
21 metres total was what level of waste?

22 MR. KUPFERSCHMIDT: I will  
23 redirect to Bob Helbrect.

24 Bob.

25 MR. HELBRECT: I believe it was

1 divided between low level and intermediate --

2 THE CHAIRPERSON: I'm sorry, your  
3 microphone is not on, and we are unable to record  
4 it.

5 MR. HELBRECT: Sorry. Bob  
6 Helbrect, former Director for WL decommissioning.

7 Of the 600 metres cubed, I believe  
8 it was divided between intermediate level and low  
9 level. I don't know what the split was. There  
10 was no high level.

11 That waste was managed within the  
12 operational facilities at Chalk River. As Bill  
13 Kupferschmidt referred to, the volume for  
14 Whiteshell would have significant impacts on  
15 another operating facility, whereas this was a  
16 small volume that could be accommodated within the  
17 operation of another facility with minimal impact.

18 MEMBER McDILL: Thank you.

19 THE CHAIRPERSON: I have a  
20 question with regard to the development of the  
21 six-year plan. I think we heard some comments  
22 from Mr. Yee that talked about compression of more  
23 activities into a shorter time period.

24 I would like AECL and then the  
25 staff to talk about the decision-making in terms

1 of what is possible to do within six years. Were  
2 other scenarios looked at in terms of what you  
3 would do within that six-year period that would  
4 speed up the decommissioning and some sense of why  
5 those other options were rejected?

6 MR. KUPFERSCHMIDT: Bill  
7 Kupferschmidt, Atomic Energy of Canada Limited.

8 Again, I will make a few comments.

9 The work that was to be carried  
10 out in Phase 1 decommissioning that is part of the  
11 current six-year plan is organized into a series  
12 of very interconnected activities, integrated into  
13 a well-defined and accepted overall plan with  
14 regard to a sales perspective.

15 It will involve the  
16 decontamination, modification and shutdown of  
17 facilities, culminating in a safe state of  
18 storage-with-surveillance.

19 As part of that, as well, we will  
20 be executing a lot of work associated with the  
21 planning for Phase 2.

22 With regard to accelerating the  
23 program, as part of the environmental assessment  
24 activity there were three options identified. One  
25 was a 100-year, one was a 60-year and the other

1 was a 20-year plan for decommissioning of the  
2 site.

3 Based on the study that was done  
4 and our assessment of it, the 60-year time frame  
5 was the one that was best able to be accommodated  
6 with regard to the staffing levels and our ability  
7 to respond to proceeding with this in an organized  
8 manner.

9 I think I will now defer to Bob  
10 Helbrect to add to that with regard to discussion  
11 of the other alternatives that were being  
12 proposed.

13 MR. HELBRECT: Bob Helbrect,  
14 former Director for WL decommissioning.

15 The project plan for Phase 1 is  
16 one which flows from the shielded facilities and  
17 the Building 300 research laboratory through to  
18 service and support systems and facilities.

19 The flow is one in which you need  
20 to remove the wastes from the farthest out  
21 facility, the shielded facilities and the  
22 laboratories, to be able to bring facilities like  
23 decontamination centres, active liquid waste  
24 treatment and service systems like active drainage  
25 to their monitoring and surveillance state.

1                   That largely determines the time  
2 frame.

3                   Even within individual facilities,  
4 if you take a large building like the Building 300  
5 facility, one does not inject a huge number of  
6 resources to run through the building  
7 decontaminating. It needs to be done essentially  
8 in a top-down manner so that once you have  
9 decontaminated upper levels you are only impacting  
10 on what you haven't addressed below. And you go  
11 through it systematically.

12                   That largely determines the time  
13 frame required to complete Phase 1, and it is not  
14 likely that it can be shortened in any significant  
15 way.

16                   The activities that are planned  
17 for Phase 2, just to come up with safe means of  
18 doing the work and designing and providing the  
19 equipment and facilities required to recover  
20 wastes and process them into packages that are  
21 suitable for enhanced storage, takes a significant  
22 period of time.

23                   That planning work is done as a  
24 part of Phase 1 so that roughly at the end we are  
25 able to commence with Phase 2 work.

1 DR. FEHRENBACH: I would like to  
2 add to that, by way of summary, that the  
3 activities required in Phase 1 are those which  
4 must be undertaken no matter what the detail of  
5 activity in Phase 2 and subsequent phases is.

6 As Bob said, we don't think that  
7 it can be accomplished any faster. I would note  
8 that it in fact has taken us longer to get to this  
9 stage than we would have expected three or four  
10 years ago.

11 THE CHAIRPERSON: Staff comments?

12 MS MALONEY: It is Cait Maloney.

13 I would concur with the first part  
14 of Dr. Fehrenbach's statement, that we believe  
15 that the six-year time frame is appropriate for  
16 the work that is proposed.

17 We also note, as Dr. Thompson said  
18 earlier, that the environmental monitoring data  
19 that will be gathered in that phase, will be  
20 pivotal to design any future monitoring programs.

21 So we are satisfied with that.

22 THE CHAIRPERSON: Mr. Yee, I noted  
23 at the beginning of your presentation you did a  
24 preamble that talked about the 60 years versus the  
25 six years. Recognizing the job before the

1 Commission is six years, are there some specific  
2 plans that you had put forward to AECL as part of  
3 the consultation or comments that you have that  
4 the Commission should hear today about what should  
5 be done differently within that six-year period?

6 MR. YEE: Edwin Yee with Manitoba  
7 Conservation.

8 You have to understand that we are  
9 not experts in this field. Many of us have other  
10 environmental health disciplines. We have  
11 representatives from the Department of Health,  
12 myself, Resources, other people from Environment.

13 Our expertise isn't in the  
14 radiological field, so we do rely on -- as I said,  
15 we have a lot of confidence in AECL. It is not  
16 that we lack confidence in AECL.

17 Our big concern is they did put  
18 forward in this document three options. One of  
19 the options was a 20-year option, and we felt the  
20 advantage of the 20-year option is that we would  
21 get away from this longevity of not having staff  
22 around. The continuity is much more difficult to  
23 maintain over the 60 years versus the 20-year  
24 period.

25 It certainly meant a greater level

1 of commitment, we felt, from AECL and in general  
2 the Government of Canada, the CNSC that have to  
3 review and regulate AECL in doing this compressed  
4 into a shorter time frame so that we have a  
5 greater level of confidence.

6 As well, both the financial  
7 commitments and policy commitments would be more  
8 in place, we felt, as opposed to a longer period  
9 of time.

10 THE CHAIRPERSON: To summarize,  
11 the recommendation that you have is that it would  
12 be a 20-year period totally, if I am understanding  
13 it, but that there is nothing specific that you  
14 would add to the first phase of this that would  
15 need to be done within the first six years that  
16 hasn't been considered yet by AECL or the staff.

17 Am I correct in that summary?

18 MR. YEE: Probably. Some of it  
19 was mentioned by Mayor Simpson in terms of looking  
20 at what is already there in storage. It has been  
21 identified by AECL that some of it is not  
22 appropriate for longer short-term storage, if you  
23 want to call it that -- I don't know what to call  
24 it -- intermediate storage.

25 I guess the feeling would be that



1           they should begin looking at -- knowing that there  
2           are standards in existence, OECD countries, and  
3           there are certain accepted practices on temporary  
4           or interim storage that could be put into place  
5           almost immediately or at least begin that process.

6                           That is the kind of thing I guess  
7           we would like to see.

8                           THE CHAIRPERSON:  You have led  
9           into my second question, which is the use of the  
10          words "standards and guidelines".  These are  
11          fairly important words for us in the Commission  
12          and also for the staff.

13                          Do standards exist, international  
14          standards, the accepted use of the word  
15          "standards", on these practices that have been  
16          outlined by Mr. Yee?

17                          This is to staff.

18                          MS MALONEY:  It is Cait Maloney  
19          here.

20                          Both the NEA and the IAEA have  
21          extensive documentation in this area which  
22          document minimum practices.  Most of those I would  
23          characterize as guidelines than standards, though.

24                          THE CHAIRPERSON:  Do you have any  
25          comments with regards to the suggestions that

1 Mr. Yee has made versus the project we have before  
2 us in terms of standards; some specific areas that  
3 the Commission should be aware of a gap between  
4 standards and practices being used in this  
5 project?

6 MS MALONEY: In terms of  
7 standards, I don't believe there is any gap at all  
8 at this stage. I think there are some emerging  
9 practices that may be different than the proposal  
10 that is ahead of us, the second and third phases  
11 of this project.

12 But that is for future discussion,  
13 I would submit.

14 THE CHAIRPERSON: Thank you very  
15 much, Mr. Yee.

16 We will now move to the --

17 MS MALONEY: Madam Chair, I beg  
18 your indulgence.

19 Could I note that I believe there  
20 is an error in the presentation that is before us.  
21 There is a statement that is given as a quotation  
22 of an AECEB report. I think actually it is an AECL  
23 report.

24 I would like to note that for the  
25 record, if you wouldn't mind. I apologize. It

1 was just brought to my attention.

2 THE CHAIRPERSON: Could you be  
3 more specific.

4 MS MALONEY: I will, certainly.

5 On page 1 in the third bullet  
6 which talks about Tunney's Pasture --

7 THE CHAIRPERSON: This is which  
8 CMD?

9 MS MALONEY: The one that is  
10 before us at the moment, which is H19.4.

11 On page 1, the heading is  
12 "Inconsistent with AECL Past Practice". In bullet  
13 no. 3, the second sentence starts: "AECB  
14 concluded" and goes on from there.

15 While we don't disagree with the  
16 conclusion, the statement actually comes from an  
17 AECL report, not an AECB report.

18 THE CHAIRPERSON: That is noted  
19 for the record. Thank you very much.

20 Mr. Yee, are you aware of the  
21 point that Ms Maloney has pointed out?

22 MR. YEE: Yes, Madam Chair.

23 When I prepared the submission, I  
24 took it out of "The Atomic Energy Control Board  
25 Unconditionally Released Tunney's Pasture Facility

1 for Unrestricted Use in 1994".

2 I would have to go back and check  
3 on that document, but I was almost certain it was  
4 from AECB.

5 THE CHAIRPERSON: Sorry, your  
6 microphone.

7 MR. YEE: The quotation was  
8 "Atomic Energy Control Board Unconditionally  
9 Released Tunney's Pasture Facility for  
10 Unrestricted Use in 1994". I took this literally  
11 from the report.

12 I apologize if it was an AECL  
13 report, but as I said I have taken this literally  
14 and it does say "AECB concluded". What I read  
15 into this was exactly the statement that was in  
16 that report.

17 THE CHAIRPERSON: Thank you very  
18 much.

19 Any further comments, Ms Maloney?

20 MS MALONEY: I think we will leave  
21 it at that. I stand by what I said earlier.

22 THE CHAIRPERSON: Thank you very  
23 much.

24 Thank you, Mr. Yee.

25

1           **02-H19.3**

2           **Oral presentation by the Manitoba**

3           **Department of Conservation**

4                           THE CHAIRPERSON: We will now move  
5 to the next intervenor on this, as outlined in CMD  
6 document 02-H19.3.

7                           I believe we have the Assistant  
8 Deputy Minister of Programs Division from Manitoba  
9 Department of Conservation, Mr. Wotton.

10                          MR. WOTTON: Thank you, Madam  
11 Chairman and Members of the Commission.

12                          My name is David Wotton. I am the  
13 Assistant Deputy Minister of Manitoba  
14 Conservation, and I come before you in this oral  
15 presentation representing the written submission  
16 provided by the Minister of Manitoba Conservation,  
17 the Honourable Steven Ashton in early October.

18                          Manitoba Conservation is the  
19 combination of the former Departments of  
20 Environment and Natural Resources and as such has  
21 a mandate of protecting and managing the natural  
22 resources of our province for future generations.

23                          The submission presented on behalf  
24 of the Department by the Minister clearly said  
25 that the AECL decommissioning plan was

1           unacceptable as submitted. You have heard from  
2           the Technical Advisory Committee the seven  
3           significant points that are cited in that plan for  
4           those reasons:

5                               (1) the inconsistency with past  
6           AECL practice in terms of what has been conducted  
7           at Tunney's Pasture;

8                               (2) the inconsistency that we read  
9           into the report in terms of practices of other  
10          countries, other OECD countries;

11                              (3) the time frame of 60 years  
12          that we have discussed in great detail this  
13          morning;

14                              (4) the principle of agreement  
15          between Manitoba and AECL that saw the facility  
16          come to Manitoba and develop under the pretence of  
17          having an active and functional research component  
18          of expertise in the nuclear field that was  
19          sustainable for the industry;

20                              (5) the social and economic  
21          benefits and the liabilities that were so clearly  
22          articulated by Mr. Yee's presentation;

23                              (6) the contaminants that were  
24          left in the Winnipeg River; and

25                              (7) the lack of public hearings in

1 Manitoba.

2 Those are essentially the seven  
3 key components arising to the decision that the  
4 submission provided before you in this licensing  
5 case is unacceptable.

6 In principle, as I stated,  
7 Manitoba and AECL came to a working agreement to  
8 use the land base of Manitoba in the development  
9 of the Whiteshell facility and to use a two-acre  
10 waste management area for radioactive waste  
11 disposal on that site with the pretence that we  
12 had an active highly scientific caring group to  
13 look after that.

14 That is not the case after  
15 decommissioning.

16 In fact, our concerns about the  
17 60-year period are that they are really a quasi  
18 permanent mode of storage, and we have heard very  
19 clearly from AECL that at least 21 of the 25  
20 trenches are planned for permanent storage, for in  
21 situ permanent storage.

22 The inconsistency in OECD  
23 countries, again as we evaluate the plan and as we  
24 work through other available options and  
25 alternatives, we see those inconsistencies which

1           again were raised quite well by both Mr. Simpson  
2           and Mr. Yee.

3                                 In particular, the trench, bunker  
4           and tile storage are of major concerns to us being  
5           left behind and the issues of those that we have  
6           been over this morning.

7                                 We have concern about the  
8           corporate responsibility of dealing with waste in  
9           terms of an active corporation. Throughout the  
10          1990s clearly there is very little acceptance of  
11          corporations that are in the manufacture or  
12          production business that do not control their  
13          waste. And this issue of waste in our premise of  
14          this report is being offloaded into liabilities of  
15          future generations.

16                                There are responsible practices  
17          being demonstrated clearly, as you have seen in  
18          the U.K., such as the discussion over this Drigg  
19          facility that occurred earlier this morning.

20                                There is AECL's realization that  
21          they needed to deal with waste management through  
22          the 1980s, the development of Irus, the  
23          development of the stage that it could go out to  
24          the international scope and be presented, as per  
25          example with this slide in Taipei, 1992



1 presentation by D.G. Cameron, and the fact that  
2 they knew they needed to deal with waste in an  
3 effective way but have not done so over the period  
4 of time of the 1990s and even in dealing with this  
5 plan ahead of us today.

6 The standards that we see and that  
7 we recognize for length of delay to 60 years would  
8 only be acceptable for the reactor core. And even  
9 in that, there are components of it that we  
10 believe could be removed with the existing  
11 infrastructure that is in place and the knowledge  
12 that is in place at Pinawa at this time; that  
13 there are components of this that do not have to  
14 wait for 60 years to be cared for in terms of  
15 final control.

16 It is our belief that the high  
17 level waste on the site should be removed to Chalk  
18 River. If the decision of the corporation is to  
19 take the management of nuclear research and move  
20 it, consolidate it to Chalk River, then the waste  
21 stream should also be consolidated where they  
22 maintain the highest standard of scientific  
23 expertise in the community -- in the same way that  
24 we agreed to the principle of having the research  
25 facility constructed and developed and supported

1           it throughout its time, its decades in Manitoba.

2                         All waste in the tile storage  
3           should be removed and relocated in Chalk River.  
4           And intermediate waste and low level waste removed  
5           from the bunkers and trenches and secured in an  
6           engineered facility, as we have been discussing  
7           this morning.

8                         We believe that 60 years in this  
9           plan is not responsible decommissioning; that  
10          there is no economic model, no cost-benefit to say  
11          that if we wait 60 years this is the effective  
12          rationale which will drive this decommissioning,  
13          as opposed to dealing with all of the attributes  
14          that you have had presented to you this morning  
15          and the advantages of doing this now early in the  
16          game.

17                        Also, we have major concerns about  
18          a number of the waste systems or streams that are  
19          not characterized. In fact, we heard questioning  
20          about the waste management area and the potential  
21          for migration of contaminants from that area to  
22          the Winnipeg River.

23                        On our concerns about this  
24          characterization, I would reference the Volume 3  
25          Addendum provided by AECL to you earlier in

1       deliberations, item 306 by Fisheries and Oceans  
2       that cite the recent data supporting understanding  
3       of groundwater flow movement through the waste  
4       management area are derived from two piezometer  
5       wells. The data from one well were deemed to be  
6       inconclusive due to poor well construction. Since  
7       understanding the groundwater movement through the  
8       WMA affects the migration of contaminants to the  
9       Winnipeg River, additional wells should be  
10      installed.

11                               Clearly, we do not have the  
12      information characterizing the waste drains or the  
13      hydrogeological components of that surrounding  
14      area.

15                               Again, that is also referenced by  
16      CNSC staff in the Volume 2 Appendices.

17                               I would refer you at your leisure  
18      to review Item 75, Canadian Nuclear Safety  
19      Commission comment the major hydrogeological  
20      deficiency in the CSR is the absence of  
21      hydrochemical information on existing groundwater  
22      quality in the vicinity of the WMA.

23                               Intrinsic knowledge is lost. We  
24      have heard that point raised significantly. Part  
25      of that knowledge is in the characterization of

1           this waste stream, because the waste stream in the  
2           trenches and the tiles, particularly the trenches,  
3           has occurred over 25 years.

4                         In the first 25 years of  
5           operation, my understanding is the first 15 were  
6           with very little documentation of that 25.

7                         Certainly the intrinsic knowledge  
8           of operations is something inherent in the way  
9           Manitoba has conducted itself throughout the  
10          development of this operation and continues to in  
11          looking in a creative way, in a constructive way  
12          in the plan for decommissioning.

13                        The small gains we pick up from  
14          Tunney's Pasture with the larger issues that we  
15          need to resolve at Whiteshell ultimately are going  
16          to help us to address the bigger problems at Chalk  
17          River. This development, this research facility,  
18          has been supported by the funding from my  
19          grandparents' generation, from the tax base of my  
20          parents' generation and my generation, and we look  
21          to responding to cleaning up and to dealing with  
22          the waste streams from that development within  
23          this generation.

24                        That intrinsic knowledge lost is  
25          again critical to the social and economic

1 opportunity.

2                   Unfortunately, although we have  
3 responses from AECL that we only deal with the  
4 socio-economic side of changes to the environment  
5 as a result of this decommissioning exercise, they  
6 can't be separated. They must be considered as a  
7 whole picture.

8                   We had for the sixties, seventies  
9 and eighties been in the driver's seat for nuclear  
10 research. Together with the U.K. and other OECD  
11 countries, we advanced this nuclear research from  
12 the forties into really strong standards in the  
13 sixties and seventies and eighties.

14                   We have the opportunity now, with  
15 the Whiteshell facility, to close the loop in our  
16 nuclear research management by dealing  
17 appropriately with the waste streams left in this  
18 industry, presenting ourselves to be in the  
19 driver's seat for future activities in terms of  
20 decommissioning and other international scenes but  
21 also to be in the forefront as we address clean  
22 energy once again on the landscape and very  
23 clearly of concern with Kyoto and all of the  
24 debate and what not around that.

25                   The signs and indications are that

1 we have potential to see it come again to the  
2 front.

3 The issue with our 60-year plan,  
4 as we see now, is the burden to future  
5 generations.

6 This young Manitoban's name is  
7 Caley. She turned five in September. The current  
8 plan before you will see her at the age of 65 when  
9 it is completed, and we are ready to start the 200  
10 years of institutional monitoring.

11 Caley's children will be 40 and  
12 her grandchildren in their twenties. That is not  
13 acceptable to the province of Manitoba.

14 Winnipeg River sediments are a  
15 major concern to us and we feel have not provided  
16 adequate information to appropriate licensing.  
17 The facility located here in this community of the  
18 Whiteshell region, with 20,000 residents, has an  
19 outflow discharge on the site, one down river at  
20 Great Falls that has been recorded, and just  
21 recently, in 2000, there has been radionuclides  
22 found in the sediments of Lake Winnipeg by  
23 Lockhart et al.

24 These are cited in the documents  
25 before you.

1                   That needs to be fully understood  
2 before we approve a licensing or activity.

3                   We have heard talk about the  
4 vitrification and the concerns in liquid  
5 radioactive waste treatment, and it is just a  
6 small example of our concern that we use the best  
7 available technology and that we have the best  
8 alternatives before us.

9                   We also see the 20,000 cubic  
10 metres of waste created by this decommissioning  
11 should be sent to an appropriate facility and  
12 again contend that it should be relocated to Chalk  
13 River as opposed to adding to the burden in  
14 Manitoba.

15                  The issue of the lack of public  
16 hearings you have heard. That is a concern  
17 through the CEAA process. The environmental  
18 assessment process did not address socio-economic  
19 aspects. It is our contention that it should have  
20 and that there should have been public hearings.

21                  Our initial feelings on the  
22 decisions made by the Minister to waive hearings  
23 and move forward, we were completely discouraged.  
24 Certainly there are issues raised by DFO and other  
25 federal agencies, as found in these documents,

1 that have not been answered and yet we would have  
2 to have been responsible for if they were brought  
3 forward on resource management issues in our river  
4 systems or waterways.

5 The opportunity for public  
6 hearings is obviously a contentious issue. We are  
7 before you now speaking to you in these public  
8 hearings. But coming to Ottawa does not represent  
9 the opportunities that should be available in  
10 consideration of a plan that is to go on for 60  
11 years and then 200 years of monitoring.

12 My direction to come here, and as  
13 we heard clearly today, is to provide ten  
14 minutes -- ten minutes to defend a 60-year plan,  
15 and we are going to try to meet those standards.  
16 But it really puts to some question the  
17 appropriateness of the process.

18 Public hearings in Manitoba are  
19 really something we look forward to; we would like  
20 to have had previously and would hope that you  
21 would reconsider in your deliberations.

22 When we look to the future, we see  
23 the news release presented earlier this month, the  
24 news release that says that the Nuclear Fuel Waste  
25 Act will be coming into force tomorrow, November



1 15th.

2 We believe that the  
3 decommissioning of the Whiteshell facility should  
4 be conducted in a way that is in line with, or at  
5 least following the principles of, this Act. An  
6 Act respecting the long-term management of nuclear  
7 fuel waste, high level fuel waste, also should be  
8 following the sort of context of a plan to deal  
9 with low and medium level waste.

10 I believe the public are looking  
11 for that and made those points when they went to  
12 the various hearings over the last few years.

13 Clearly this Act states that the  
14 utility set up a trust to finance long-term waste  
15 management activities in keeping with the  
16 Government of Canada's "polluter-pay" principle.

17 The Commissioner's questioning on  
18 the financial attributes and the setting aside of  
19 monies has not been answered appropriately, nor do  
20 we feel it has been for questions that we have  
21 raised as a province on this issue.

22 This is a tool that will see that  
23 happen. The legal framework outlined in the Act  
24 confirms Canada's proactive approach to dealing  
25 responsibly with long-term management of nuclear

1 fuel waste. We look at you as Canada's agent to  
2 make sure that we move forward progressively with  
3 this issue of decommissioning and the  
4 opportunities that present themselves.

5 This new legislation clearly  
6 assigns responsibility for oversight, for the  
7 waste management organization, the nuclear  
8 utilities and the Atomic Energy of Canada to the  
9 Government of Canada. Again, we look to you as  
10 the Government of Canada's agent to provide us  
11 with the guidance, the care and the integration of  
12 these significant acts.

13 The issues put before you today we  
14 feel are significant. We ask you not to close  
15 your eyes and look at this as a six-year plan. It  
16 is part of a 60-year plan, and it really is the  
17 tip of the iceberg to the issues we have to deal  
18 with up river at Chalk River.

19 We see a great opportunity to move  
20 forward and develop the expertise and bring  
21 ourselves, as interested parties and an interested  
22 nation in nuclear research, to the forefront again  
23 and prepare ourselves for the future as opposed to  
24 offloading this waste issue on future generations.

25 Thank you.

1 THE CHAIRPERSON: Thank you.

2 I would like to clarify, since you  
3 put up the news release on an overhead, the final  
4 statement is that the oversight responsibility  
5 will reside within Natural Resources Canada, not  
6 within the CNSC.

7 The CNSC responsibilities, as  
8 outlined in the Nuclear Safety and Control Act --  
9 which is just a little over two years old, May  
10 2000 -- guides this Commission.

11 I just want to clarify the  
12 difference in responsibility between Natural  
13 Resources Canada and the CNSC with this matter.

14 With that clarification, I will  
15 now open the floor for questions from the  
16 Commission Members.

17 Dr. Giroux? Mr. Graham?  
18 Dr. Barnes?

19 MEMBER BARNES: I would like  
20 clarification on one or two points.

21 That was a very eloquent  
22 presentation. One of the points you made -- I  
23 have the comprehensive study documents here -- was  
24 with reference to the DFO criticism; that there  
25 was not enough subsurface well data or information

1 on hydrochemistry.

2 I got the impression from the  
3 documents that in fact the site was fairly well  
4 characterized by well data, water levels over  
5 20,000, water level measurements over an extended  
6 period, as well as groundwater modelling.

7 Could you clarify for me again  
8 what that citation was. Was it just the flow into  
9 the river that the DFO were criticizing or the  
10 quality of groundwater data overall on the site?

11 Maybe staff could respond, as  
12 well.

13 MR. WOTTON: Thank you,  
14 Dr. Barnes. It is Dave Wotton, with Manitoba  
15 Conservation.

16 The point that I had brought  
17 forward is found in the Addendum. In comments 306  
18 and 352, Department of Fisheries and Oceans  
19 comment on the water quality monitoring  
20 information of groundwater flow through the waste  
21 management area.

22 It cites two piezometer wells that  
23 had been in place for most of the lifespan of the  
24 monitoring station and the recognition that one of  
25 those -- as they began to evaluate the

1 information, it was clear that one of them has  
2 been compromised and the data was not acceptable  
3 for use.

4 That has also been picked up by  
5 your own staff, the CNSC staff, and pointed out in  
6 the documents, and by other scientists.

7 Although we are led to believe  
8 there is information that is clear on the  
9 hydrogeological characteristics of that site, we  
10 have serious question about those.

11 The Department of Conservation  
12 brings those questions forward with our experience  
13 in Manitoba soils that we have evolved through the  
14 late eighties and nineties as we wrestled with new  
15 regulations dealing with waste disposal grounds  
16 and the disposal lagoons for livestock manure  
17 waste.

18 It comes from the premise that  
19 through the sixties and seventies and eighties it  
20 was commonly thought that if you had a clay base,  
21 you had impermeable soils. Very clearly there is  
22 a lot of clay in the Manitoba landscape and in the  
23 Pinawa area.

24 But clearly, too, the old  
25 assumption that it was restricted to horizontal

1           cracking and horizontal movements is not  
2           acceptable through the 1990s and the year 2000.  
3           We have clearly moved away from that.

4                         We would not have a waste disposal  
5           site without a lining to ensure that we had  
6           control of the waste had this site been proposed  
7           for trench use.

8                         We can all use hindsight to say  
9           that.

10                        The issue is that the hydrogeology  
11           and the study of the physical characteristics of  
12           clay soils and our landscape have been seriously  
13           questioned through the nineties. We bring those  
14           questions forward again as we prepare ourselves  
15           for a plan that, as you heard this morning,  
16           intends to leave waste in 21 of those trenches  
17           forever, or close to it, or certainly not disturb  
18           it until 60 years down the road.

19                        We also hear clearly, or at least  
20           my understanding is, that for 25 years all the  
21           waste was dumped into those trenches and that for  
22           a good 15 of the first operational years there is  
23           very little documentation of what went in. That  
24           concerns us.

25                        And it concerns us that we move to

1 a stage of licensing without knowing more about  
2 those characteristics and understanding what is  
3 being licensed here.

4 I reiterate my colleague Edwin  
5 Yee's concern: this six-year stage is the  
6 beginning of a 60-year concurrence to the plan  
7 before us.

8 MEMBER BARNES: Could I follow  
9 that up with a request of staff that they address  
10 the issue of the wells.

11 In 306 it indicates that  
12 additional wells should be installed to provide  
13 conclusive evidence as to the nature of  
14 groundwater through the WMA.

15 Are there plans to install those  
16 wells?

17 As a second comment, perhaps AECL  
18 could address the last comment of Mr. Wotton  
19 regarding the statement that for the first 15  
20 years there was very little record of what went in  
21 or perhaps an awful lot of material went into  
22 those trenches.

23 MS MALONEY: It is Cait Maloney.

24 I will start by noting that  
25 Fisheries and Oceans were the responsible

1 authority, as we were, and they agreed to refer  
2 the project to the Minister of Environment for  
3 decision. So obviously they were satisfied enough  
4 at the global level to let the project go across  
5 to the Minister for consideration.

6 I will now ask Dr. Thompson to  
7 respond with specifics.

8 DR. THOMPSON: Patsy Thompson, for  
9 the record.

10 The issue that had been identified  
11 first by CNSC staff and then that Fisheries and  
12 Oceans commented on was the groundwater data from  
13 the two wells that was used to essentially  
14 demonstrate that water levels in the trenches  
15 would not be such that there would be movement of  
16 material out of the trenches.

17 In response to comments on the  
18 first revision of the comprehensive study report,  
19 AECL provided the data to a consultant for the  
20 consultant to analyze the data. Essentially what  
21 Fisheries and Oceans picked up on is that the  
22 consultant then concluded that the integrity of  
23 the groundwater monitoring data was not such that  
24 it could support the conclusions of water levels  
25 in the waste management area.



1                   In response to those issues, the  
2 follow-up program includes a requirement to put in  
3 monitoring wells and to analyze the data. Should  
4 the data indicate that the trenches are not fit to  
5 keep the material, then remediation action would  
6 be required.

7                   Certainly the follow-up program  
8 does include a requirement to address those  
9 issues.

10                   MR. KUPFERSCHMIDT: Bill  
11 Kupferschmidt, Atomic Energy of Canada.

12                   I will further confirm that the  
13 follow-up program will address the issue that  
14 Dr. Thompson has just noted.

15                   With regard to your specific  
16 comment about the first 15 years, I will redirect  
17 that question to Bob Helbrect.

18                   MR. HELBRECT: Bob Helbrect,  
19 former Director for WL decommissioning.

20                   The records for the first 15 years  
21 are in fact logs that maintained an entry for all  
22 of the waste packages that were collected in the  
23 waste management facilities and then were  
24 ultimately transferred to the trenches.

25                   Much of it simply lays it out as

1 plastic bags, drums, cans and containers that came  
2 out of the operational areas.

3 It is important to note that the  
4 characterization of that waste is based largely on  
5 the radiation fields emanating from it, and that  
6 was the qualifying criteria for putting it in the  
7 waste trenches.

8 It was subsequently confirmed as  
9 to the radionuclide content by comparing it to  
10 various characterization jobs that were done with  
11 WR-1 and with the releases from the site, because  
12 essentially, all of the waste emanates from the  
13 activities with the research programs associated  
14 with the WR-1 reactor.

15 So we have been able to  
16 characterize the radioactivity content fairly  
17 well, and we have a physical description of all  
18 the packages and the locations that they were put  
19 into the trenches -- although not individually.  
20 You can't determine where an individual package is  
21 in the trench.

22 MEMBER BARNES: Is that a  
23 description of the package or a description of the  
24 contents in the package?

25 MR. HELBRECT: In some cases they

1 are descriptions of the contents. In most cases  
2 it is just a description of the package and does  
3 give a radiation field associated with each  
4 package.

5 For most low level waste, it is  
6 just the routine waste coming out of active area,  
7 much of it just collected in routine office  
8 garbage cans even for operational areas.

9 THE CHAIRPERSON: Are there  
10 further questions?

11 DR. FEHRENBACH: Could I just add  
12 an additional qualification, please.

13 Paul Fehrenbach speaking.

14 I would like to correct a  
15 misimpression that Mr. Wotton left that all of the  
16 wastes for the first 15 or 20 years went into the  
17 trenches. That is not true. Only the low level  
18 waste, which met the acceptance criteria for that  
19 kind of treatment at that time, went to the  
20 trenches.

21 THE CHAIRPERSON: Thank you very  
22 much for coming.

23

24 **02-H19.5**

25 **Written submission from Keith B. Harvey**

1 THE CHAIRPERSON: We would like to  
2 then move to the next submission, which is a  
3 written submission from Mr. Keith Harvey. This is  
4 noted in CMD document 02-H19.5.

5 The Commission Members have read  
6 this written submission. Are there any questions  
7 or comments that you would like to make for the  
8 floor?

9 Mr. Graham.

10 MEMBER GRAHAM: The only question  
11 I would have would be to CNSC staff. There are  
12 some quite strong comments there, 7 and 8  
13 especially.

14 I wonder if they might have any  
15 comment.

16 My comments are to CNSC staff. In  
17 Mr. Harvey's presentation he has some quite strong  
18 comments, and I wondered for the record if they  
19 might want to comment especially on 7 and 8.

20 THE CHAIRPERSON: Perhaps we could  
21 read into the record numbers 7 and 8.

22 MEMBER GRAHAM: Number 7 I will  
23 read into the record:

24 "The 'responsible  
25 authorities' erred in their

1                   interpretation of the Act."

2                   And no. 8 is:

3                   "The 'responsible  
4                   authorities' erred in their  
5                   advice to the Minister."

6                   MS MALONEY: It is Cait Maloney.  
7                   CNSC staff have reviewed this  
8                   submission and remain of the conclusion that their  
9                   interpretation of the Canadian Environmental  
10                  Assessment Act was correct and that the advice  
11                  provided to the Minister was also correct.

12                  THE CHAIRPERSON: I would like to  
13                  ask a question with regard to the cumulative  
14                  environmental effect that is noted in Mr. Harvey's  
15                  document on page 2.

16                  He talks about the definition, or  
17                  lack of specificity within CEAA, and made some  
18                  comments with regard to this project.

19                  Are there any comments from the  
20                  staff?

21                  MS MALONEY: I would like to ask  
22                  Mr. Chamney to respond, please.

23                  MR. CHAMNEY: I would like to ask  
24                  a question of clarification, Madam President.

25                  Which item on page 2 was that?

1 THE CHAIRPERSON: The pages are  
2 not labelled, but it is the item on page 2 (b)  
3 where he talks about the issues to do with  
4 assessment of cumulative effects under CEAA.

5 I thought perhaps you could give  
6 us some clarification whether this was an issue  
7 that was looked at under the assessment. What are  
8 the implications for this licence, if any?

9 MR. CHAMNEY: Consistent with the  
10 requirements of the Canadian Environmental  
11 Assessment Act, the assessment of cumulative  
12 effects associated with the decommissioning  
13 activities was a requirement and was included in  
14 the scope of the assessment.

15 This, in fact, was conducted by  
16 the proponent as directed, and the information was  
17 reviewed by the responsible authorities and the  
18 other technical reviewers.

19 When looking at cumulative  
20 effects, we look at past practices and past  
21 projects, and we also requested consideration be  
22 given to existing projects and future projects  
23 which were well known and in the planning stages.

24 We did not speculate on future  
25 economic development. That was not identified in

1 any regional plans for eastern Manitoba.

2 From the point of view of this  
3 assessment, cumulative effects were restricted to  
4 those projects which had occurred in the past,  
5 which were current and which were known to be  
6 taking place over the next few years.

7 THE CHAIRPERSON: Are there  
8 further questions?

9 Thank you very much.

10 This now completes the record of  
11 the public hearing on the matter of the  
12 application by Atomic Energy of Canada Limited to  
13 decommission Whiteshell Laboratories.

14 The Commission will deliberate and  
15 will publish its decision in due course, and it  
16 will be published on the CNSC Web site and  
17 distributed to participants.

18 Thank you all very much for  
19 coming.