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07-H141

**Written submission from
CNSC Staff**

MR. HOWDEN: Thank you. Barclay Howden,
for the record.

Nothing further to add, Madam Chair. CNSC
staff is prepared to respond to questions.

Thank you.

THE CHAIRPERSON: Mr. Gitzel, are there
comments from Cameco?

MR. GITZEL: Thank you, Madam Chair.

I have with me for this presentation, Andy
Oliver, our Vice-President, Fuel Services, who has
responsibility for the Blind River Refinery.

We also have with us our General Manager of
the Blind River Refinery, Chris Astles, who will be making
a presentation to the Commission today.

MR. ASTLES: For the record, I am Chris
Astles, General Manager at Blind River Refinery. With me
today I have Tom Smith Specialist, Environmental
Initiatives; John Jarrell, VP of Safety, Health,
Environment and Quality; and Joe DeGraw, Superintendent,
Quality, Compliance and Licensing.

1 Cameco's Blind River Refinery was
2 commissioned in 1983 as a green field site. At present,
3 the Blind River Refinery Facility receives uranium ore
4 concentrates from Cameco's Saskatchewan's mining
5 operations, as well as from other Canadian and foreign
6 producers.

7 The UOC is weighed, sampled, analysed and
8 refined to uranium trioxide in a series of steps involving
9 the digestion of the uranium in nitric acid and
10 purification by solvent extraction, followed by
11 evaporation and de-nitration of the purified uranium.

12 The pure uranium trioxide is collected in
13 tote bins and shipped to the Port Hope Conversion Facility
14 for conversion to either uranium hexafluoride or uranium
15 dioxide. These compounds are used for the light and heavy
16 water reactor programs, respectively. Uranium processing
17 is federally regulated and licensed by the Canadian
18 Nuclear Safety Commission.

19 The preliminary decommissioning plan
20 outlines a conceptual plan for the decommissioning of the
21 Cameco Blind River Refinery. Cameco has engaged SNC
22 Lavalin Engineers and Constructors Inc. to revise and
23 update the previous PDP prepared by Cameco in 2001, and to
24 develop an independent capital cost estimate for the
25 decommissioning of the Blind River Refinery.

1 This document has been prepared for the
2 Canadian Nuclear Safety Commission in accordance with
3 their guidance documents G-219 and G-206; Decommissioning
4 Planning for Licensed Activities; and Financial Guarantees
5 for the Decommissioning of Licensed Activities,
6 respectively.

7 The costs derived from the "decommission
8 tomorrow" concept assumes that the licensee is not
9 available to fulfil its obligations for decommissioning
10 and that a third party will manage the project.

11 For the scenario portrayed in the PDP, the
12 management of the implementation of the decommissioning
13 elements described herein would be undertaken by a
14 management contractor, an independent third party project
15 management firm.

16 Thus, the basis of the PDP and cost
17 estimate for the financial guarantee is a combined
18 approach of a prompt decommissioning scenario with an in
19 situ confinement disposal scenario for all low-level
20 radioactive waste generated from the decommissioning.

21 The broad concept for decommissioning of
22 the Blind River Refinery involves dismantling and removing
23 the buildings and equipment from the site and re-mediating
24 the site back to a state similar to its natural state,
25 with the exception of a small portion of the site which

1 will comprise an engineered mound to contain the remaining
2 contaminated soil and building rubble in a secure managed
3 facility.

4 Once a decision is made to decommission the
5 facility, the management contractor will assume control
6 and begin to conduct an orderly plant shutdown and clean-
7 out, chemical inventory drawdown and transfer of the
8 onsite uranium inventory. This would be performed by key
9 facility personnel engaged by the management contractor.

10 Decommissioning of the Blind River Refinery
11 would require preparation of documentation in support of
12 obtaining a formal decommissioning licence.
13 Decommissioning would begin once the CNSC has issued a
14 licence to decommission.

15 The next phase of the project would be to
16 construct an onsite encapsulated storage mound for the
17 disposal of contaminated materials. Building internals
18 would then be removed and decontaminated if required.
19 Decontaminated process equipment and building materials
20 would then be released from the site. However, no salvage
21 value has been assumed. The structures would then be
22 demolished and either disposed of in the encapsulated
23 storage mound or municipal landfill.

24 The site remediation would involve the
25 removal of superficially contaminated soils and

1 transferred to the encapsulated mound. Upon completion of
2 the decommissioning project, the site would be re-
3 vegetated. The end state objective is that the site, with
4 the exception of the engineered mound, would be suitable
5 for redevelopment or institutional control.

6 After closure, the mound would be monitored
7 for a period of five years to make sure that it meets
8 final closeout standards. Post the five-year period a
9 fund would be established to provide long-term
10 institutional control in perpetuity.

11 The current estimated costs in 2007 dollars
12 for decommissioning the Blind River Refinery is \$36
13 million. This amount represents a significant increase to
14 the 2001 cost estimate of 14.6 million.

15 This is attributed to the following:
16 Increased costs associated with demolition, equipment
17 removal and decontamination; increased sanitary landfill
18 costs; increased transportation costs; increase in labour
19 rates; increase in third-party management costs; the
20 annuity for mound care and perpetuity was increased
21 significantly; and inclusion of escalation for five years.

22 This preliminary decommissioning plan is
23 subject to the approval of the Canadian Nuclear Safety
24 Commission. In accordance with current regulatory policy,
25 Cameco will submit a detailed decommissioning plan to the

1 Canadian Nuclear Safety Commission at least one year
2 before the scheduled end of operation at the Blind River
3 Refinery.

4 The PDP will be periodically reviewed and
5 updated to reflect changes in operations, conditions,
6 evolving technologies and regulatory requirements. The
7 PDP will be utilized to develop the detailed
8 decommissioning plan, along with operational and
9 historical site records.

10 In summary, the Blind River Refinery PDP,
11 Issue 6, has been revised and updated to meet the CNSC
12 Regulatory Guidelines G-219, Decommissioning Plan for
13 Licensed Activities and G-206, Financial Guarantees for
14 the Decommissioning of Licensed Activities, to reflect
15 current conditions at the site and account for increased
16 costs associated with decommissioning and to adequately
17 address the comments from the CNSC staff.

18 Cameco respectfully requests the Commission
19 to accept the Blind River Refinery pre-decommissioning
20 plan and proposed financial guarantee.

21 Upon acceptance of the Commission, Cameco
22 will endeavour to update the irrevocable letter of credit
23 within 15 business days.

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

25 We'll open now for questions.

1 Mr. Graham, would you like to start this
2 one?

3 **MEMBER GRAHAM:** I just have two questions.

4 First of all, was there or has there been
5 any consultation with the Municipality or the community of
6 Blind River with regard to this new PDP and the financial
7 guarantee that's being brought forward.

8 **MR. OLIVER:** Andrew Oliver, for the record.
9 I'll ask Chris Astles to respond.

10 **MR. ASTLES:** For the record, Chris Astles.

11 Both the local municipality and Mississaugi
12 First Nation were made aware of the process of the
13 licensing for this site and the fact that a PDP would have
14 to be developed. As well, discussions have been held with
15 the mayor and the town council with what's involved with
16 the PDP. But no public consultations have taken place.

17 **MR. GRAHAM:** Was there any indication that
18 they would want more information or they were satisfied?
19 Are you saying they were satisfied with the information
20 that was given?

21 **MR. ASTLES:** Chris Astles, for the record.

22 The real concern that was presented by the
23 mayor and the council was the concern that a
24 decommissioning could actually occur at the site. The
25 community depends quite heavily on Cameco.

1 **MR. GRAHAM:** Thank you. The only other
2 question I have is in the document that it's talking --
3 and you mention about a 40,000 cubic meter mound, \$2
4 million being set aside for that, five-year review, and
5 then put into perpetual care, and so on.

6 Is that \$2 million in the construction of
7 that mound and the perpetual care included in the \$36
8 million that's before us, today?

9 **MR. OLIVER:** Andrew Oliver for the record.
10 I'll ask Tom Smith to respond.

11 **MR. SMITH:** Actually, the cost of the mound
12 is \$1.5 million and the annuity being provided for care is
13 \$2 million and that's included in the PDP total cost
14 estimate.

15 **MR. GRAHAM:** So the \$2 million is in the
16 annuity part, and so it's still really \$3.5 for the mound?

17 **MR. SMITH:** Tom Smith, for the record;
18 that's correct.

19 **THE CHAIRPERSON:** If I could just ask a
20 question of clarification?

21 The question that I had was the
22 transportation from Port Hope to Blind River, where would
23 that amount be?

24 **MR. SMITH:** For the record, the cost of
25 transportation from Port Hope to Blind River would be

1 borne by Port Hope. It would be in the PDP for Port Hope.

2 **THE CHAIRPERSON:** So where -- when it talks
3 about transportation increased costs, that's where that
4 is?

5 **MR. SMITH:** For the record, Tom Smith.
6 The increased transportation costs
7 associated with Blind River is the diversion of clean
8 materials to sanitary landfill.

9 **THE CHAIRPERSON:** But it isn't?

10 **MR. SMITH:** That is correct.

11 **THE CHAIRPERSON:** Because there is an
12 ongoing transfer as well? That's ongoing cost, that's not
13 to do with decommissioning? Because we were talking about
14 moving materials to Blind River as an ongoing ---

15 **MR. SMITH:** The transportation of product
16 is not part of the PDP.

17 **THE CHAIRPERSON:** Yes, okay, just
18 understand that.

19 Dr. McDill.

20 **DR. MCDILL:** Thank you. The last question
21 for me, I think, perhaps.

22 With respect to the encapsulated storage
23 mound, is there going to be a volume reduction of building
24 materials or are they going in holus bolus in whatever
25 size they come out?

1 **MR. SMITH:** For the record, Tom smith.

2 I'm sorry. Could you repeat that question?

3 **DR. McDILL:** Yes. Holus bolus is a well-
4 known engineering term.

5 In the encapsulated storage mound, will you
6 be -- is the intention to employ any kind of volume
7 reduction of building materials, or will the -- whatever
8 the size is at the point of demolition, will they just be
9 put in the mound at that size?

10 **MR. SMITH:** For the record, Tom smith.

11 The material that would be placed in the
12 mound would have to be sized appropriately for placement.
13 For example, it would be our intent to cut concrete slabs
14 using diamond-tipped cutters and place those in the mound
15 as whole entities, depending on the limits of the ability
16 to carry it from the plant to the mound.

17 **DR. McDILL:** So there would be some effort
18 of volume reduction, as appropriate.

19 Could I have staff's comment on that?

20 **MR. BARKER:** Bob Barker, for the record.

21 The PDP plan makes -- does account for
22 segregation of clean materials from during the
23 decommissioning process. So in fact, only contaminated
24 materials that really cannot be cleaned and decontaminated
25 would find themselves in the mound.

1 **DR. McDILL:** I understood that it was the
2 volume reduction of those materials that I was interested
3 in. Because I don't have the entire PDP in front of me,
4 so I can't see what's there, so I was asking for the
5 opinion on volume reduction.

6 **MR. BARKER:** Within the PDP there's no
7 specific allowance for volume reduction. I mean, when you
8 develop a mound in general and Cameco does have fairly
9 significant experience with that, you have to place the
10 mound contents very carefully. You do have to compact
11 them to assure that the mound is stable from an
12 engineering point of view.

13 But in terms of volume compaction, for
14 example through a trash compactor/reducer, that is not
15 accommodated within the PDP.

16 **DR. McDILL:** Thank you, Madam Chair.

17 **THE CHAIRPERSON:** So I read that as not
18 required by the PDP, if the company wishes to do that,
19 which makes good sense that's for them to do.

20 **MR. BARKER:** Correct.

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

22 Further questions?

23 With respect to this matter, I propose that
24 the Commission confer with regards to the information that
25 we've considered today and then determine if further

1 information is needed or if the Commission is ready to
2 proceed with the decision, and we will advise accordingly.

3 Thank you very much; my apologies again for
4 the delay. And this brings to the close the public
5 hearings of the Canadian Nuclear Safety Commission. I
6 would like to thank you all for your attendance today.

7 Thank you.

8 --- Upon adjourning at 4:26 p.m.

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