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**COGEMA Resources Inc.:**  
**Application for an amendment**  
**to the McClean Lake Operation**  
**Uranium Mine and Mill**  
**Operating Licence to allow**  
**Open-pit mining and milling of**  
**the Sue E ore body**

**05-H19.1 / 05-H19.1A**

**Oral presentation by**  
**COGEMA Resources Inc.**

**MR. POLLOCK:** Good morning, Madam Chair and  
Members of the Commission.

For the record, I am Bob Pollock, Vice-  
President, Environment, Health and Safety for COGEMA  
Resources Inc. Also present today on behalf of COGEMA is  
Jim Corman, General Manager of McClean Lake Operation.

We are here today to support our  
application to amend the uranium mine operating licence  
for McClean Lake Operation to allow COGEMA to mine and  
process uranium ore from the Sue E open-pit mine.

Additional COGEMA staff are present by  
videoconference at the CNSC office in Saskatoon if it

1 would be helpful to have them provide further detail in  
2 response to a question.

3 This slide outlines today's presentation.  
4 After this introduction, Jim Corman will discuss  
5 organizational and quality management for McClean Lake  
6 Operation. He will then describe the proposed mining  
7 activities at Sue E, the subsequent processing of the ore  
8 at the JEB Mill and management of associated waste.

9 I will then discuss programs established to  
10 protect the environment and the health and safety of  
11 persons before concluding the presentation with a brief  
12 summary.

13 COGEMA Resources, which we will refer to  
14 simply as COGEMA from here on, has appeared before the  
15 Commission on four prior occasions in 2005. A two-day  
16 hearing was held in January and April to consider the  
17 renewal of the McClean Lake operating licence with an  
18 amendment to expand the JEB Mill to receive uranium ore  
19 from Cigar Lake in the future.

20 Presentations prepared by COGEMA in support  
21 of that application provide an overview of McClean  
22 Operation and its performance.

23 In June, the Commission held a public  
24 hearing to consider the results of an environmental  
25 assessment screening under the *Canadian Environmental*

1        *Assessment Act* of the proposed project to mine and mill  
2        uranium ore from the Sue E site. It was concluded that  
3        the proposed Sue E Project, taking into account identified  
4        mitigation measures, is not likely to cause significant  
5        adverse environmental effects.

6                    Given the short summer season in Northern  
7        Saskatchewan, the Commission gave consideration to an  
8        application for weather-sensitive preparatory work for the  
9        Sue E Mine in July 2005. A favourable decision has  
10       allowed COGEMA to proceed with this work which is being  
11       conducted at our financial risk, understanding that the  
12       earlier decision by the Commission does not prejudice  
13       consideration of the amendment for the full Sue E Project  
14       which is the subject of this hearing. Day Two of this  
15       hearing is scheduled for October 19.

16                   Information in our earlier presentations  
17       remains valid but is largely not repeated in this  
18       presentation which focuses specifically on Sue E.

19                   Jim Corman will now continue our  
20       presentation.

21                   **MR. CORMAN:** Thank you, Bob.

22                   For the record, I am Jim Corman, General  
23       Manager of McClean Lake Operation.

24                   I would like to start by showing how  
25       managing Sue E is accommodated by our ongoing

1 organizational management structure. This figure shows  
2 the senior positions responsible for management of McClean  
3 Lake Operation, including both corporate office positions  
4 and site positions with site positions in bolded boxes.  
5 Both line management and functional relationships with the  
6 latter shown by dotted lines are included.

7 As the General Manager I am responsible for  
8 all on-site operations, general site management and  
9 liaison with regulators on matters concerning the CNSC  
10 operating licence.

11 Operational functions and responsibilities  
12 at McClean Lake are organized into five major departments,  
13 as shown on this slide.

14 The next slide will focus on the Service  
15 Department. The Service Department is led by the Service  
16 Superintendent and has two main areas of responsibility,  
17 mining and service support functions.

18 This figure shows the four major groups  
19 responsible for open-pit mining activities, shaded in  
20 green. These include mine operations, mine maintenance,  
21 geology and mine engineering with the underlying principle  
22 being that the Service Department has the capabilities  
23 internally for all activities directly required for open-  
24 pit mining.

25 The service support group shaded in grey is

1 responsible for services such as site infrastructure  
2 maintenance, light-duty vehicle maintenance, camp services  
3 and security. The Service Superintendent reports directly  
4 to the General Manager.

5 Depicted in this slide is the structure of  
6 licensing documentation for McClean Lake Operation. The  
7 Mining Facility Licensing Manual is the primary reference  
8 in the uranium mine operation licence and references three  
9 key manuals which describe the physical facilities at  
10 McClean Lake, how the facilities are operated, including  
11 programs to protect health, safety and environment, and  
12 how they will be decommissioned in the future.

13 The left side of this slide identifies  
14 these enduring documents for the ongoing McClean Lake  
15 Operation. The design, operation and decommissioning of  
16 the Sue E open pit and associated service facilities has  
17 been integrated into these documents.

18 The right side of the figure identifies  
19 project-specific quality documentation for the JEB Mill  
20 Expansion Project and the Mining Equipment Development  
21 Program. These documents describe each project and how  
22 they are managed. Project-specific documents will exist  
23 only for the life of the projects which they describe.  
24 Once projects become part of the ongoing operation, their  
25 supporting quality documentation is integrated into the

1 documents which describe the ongoing operation.

2 I would like to turn to the activities  
3 required for the Sue E Project. The requested activities  
4 are presented on this slide. COGEMA requests an amendment  
5 to the uranium mine operating licence for McClean Lake  
6 Operation to allow it to develop the Sue E ore body, which  
7 includes the mining of the Sue E deposit, managing waste  
8 rock by stockpiling clean waste rock in an area northwest  
9 of the Sue E pit and disposing of special waste directly  
10 into the Sue C pit, milling the mine for uranium ore from  
11 the Sue E ore body at the JEB Mill and disposing of the  
12 resulting tailings in the JEB Tailings Management Facility  
13 and performing support activities such as water collection  
14 and treatment, ore storage and transport and environmental  
15 monitoring.

16 This figure shows a plan of the Sue E pit  
17 design. The pit has been designed based on extensive  
18 geotechnical slope stability analysis, taking into  
19 consideration the geometric outlines of the ore body, the  
20 distribution of ore within the ore body, topography,  
21 geology and economic factors, and also incorporates  
22 operational experience gained during the JEB and Sue C  
23 mining.

24 The Sue E pit will be developed using  
25 conventional drill blast shovel and truck mining

1 operations. The Sue E pit is located about 500 metres  
2 south of the Sue C pit and will have a footprint of about  
3 15 hectares and a depth of approximately 140 metres.

4 Mining of the Sue E open pit is expected to  
5 take approximately 30 months. Excavation of the Sue E pit  
6 will require the removal of surficial organic soils,  
7 overburden, cleaning waste rock, special waste rock and  
8 ore.

9 Overburden materials will be stockpiled in  
10 the north end of Sills Lake as part of the summer  
11 preparatory work considered at the July 13<sup>th</sup> meeting.

12 Organic soils will be conserved for future  
13 reclamation activities. Clean waste rock will be placed  
14 in a stockpile located in an area approximately 120 metres  
15 northwest of the proposed Sue E Pit. Special wastes will  
16 be segregated and placed into the Sue C Pit. The actual  
17 amount of clean waste deposited on surface will depend on  
18 the ability to segregate clean from special waste in the  
19 lower sand-stone horizons. If it becomes operationally  
20 difficult to segregate clean and special wastes a  
21 conservative approach will be used with the clean waste  
22 disposed within the Sue C Pit with the special waste.

23 Ore mined from Sue E will be stored  
24 temporarily on the ore transfer pad, as was the case for  
25 the higher grade Sue C ore and periodically transferred to

1 the mill ore storage pad as required for mill feed.

2 No changes to water treatment processes or  
3 treated effluent management procedures are required as a  
4 result of mining and processing Sue E ore. The area  
5 surrounding Sue E Pit will be constructed to divert clean  
6 surface runoff and to collect contaminated or potentially  
7 contaminated waters which may result from mining and other  
8 ancillary activities.

9 The water management strategy for  
10 dewatering Sils Lake and mining Sue E are similar to that  
11 planned and approved for dewatering Sue A.

12 Waters from Sils Lake and water collected  
13 from the active in-pit sumps within the Sue E Pit will be  
14 pumped to the Sue C Pit. The Sue C Pit will serve the  
15 function of a large pre-sedimentation pond from which  
16 water will be subsequently pumped to the sedimentation  
17 pond and then to the Sue water treatment plant for  
18 treatment.

19 Treated water is then released to the Sink/  
20 Vulture Treated Effluent Management System which serves as  
21 the single point of discharge to the environment for the  
22 McClean Lake operation.

23 Uranium ore mined from the Sue E Pit will  
24 be processed at the McClean Lake JEB Mill. At the Mill  
25 the ore is ground into a fine product and then a sulphuric

1 acid leaching process and solvent extraction recovery  
2 process are used to extract and recover uranium product  
3 from the ore. The Sue E ore body is expected to produce  
4 approximately 8.3 million pounds of U308 or 3,200 tonnes  
5 of uranium.

6 The tailings preparation circuit in the JEB  
7 Mill is used to treat tailings for the removal of soluble  
8 contaminants such as arsenic and radium and to neutralize  
9 and thicken the tailings prior to disposal in the JEB TMF.  
10 The tailings preparation process results in consistently  
11 acceptable tailings produced from all ores to be received.  
12 The Sue E ore has been evaluated and found to be amenable  
13 to the JEB Mill tailings preparation and disposal process.  
14 The Sue E tailings mass will constitute approximately 13  
15 per cent of the total volume of tailings to be managed in  
16 the JEB tailings management facility.

17 This concludes my part of the presentation.  
18 Bob Pollock will continue.

19 **MR. POLLOCK:** Thank you, Jim.

20 For the record, I am Bob Pollock, Vice-  
21 President, Environment, Health and Safety.

22 Ongoing programs for radiation protection,  
23 occupational health and safety, environmental protection  
24 and emergency preparedness, supported by extensive  
25 training, have been established for the McClean Lake

1 operation to meet COGEMA's corporate policies. These  
2 established programs successfully operated throughout the  
3 mining of the Sue C open pit are applied equally to the  
4 mining of the Sue A open pit and similarly will extend to  
5 the management of the proposed Sue E development.

6 No significant changes to the Occupational  
7 Health and Safety Program are anticipated for Sue E mining  
8 and milling. Opportunities for improvement continue to be  
9 implemented. For example, training heavy equipment  
10 operators on site now includes use of a heavy equipment  
11 simulator.

12 Although the Sue E ore grade is relatively  
13 low, an assessment of anticipated radiation exposures to  
14 mine workers has been conducted to ensure radiation  
15 protection is optimized. This assessment was based on the  
16 experience gained at the McClean Lake operation in the  
17 mining of the JEB and Sue C open pits and on the milling  
18 of these ores. Those predictions for future activities  
19 have been calculated by evaluating the similarities and  
20 differences between past and future activities and then  
21 adjusting the experience-based dose data accordingly. As  
22 such, the dose predictions presented do not rely  
23 significantly upon theoretical calculations.

24 It is predicted that the average total  
25 effect of dose to mine workers will be approximately 0.7

1       milliSieverts and that the maximum exposed mine worker  
2       will receive a dose of approximately 3.4 milliSieverts.

3               As stated earlier, mining and milling Sue E  
4       ores will require no changes to water treatment processes,  
5       treated effluent management procedures or tailings  
6       neutralization and disposal processes. Consequently, no  
7       substantive changes are required to the Environmental  
8       Protection Program as a result of Sue E mining.  
9       Additional groundwater monitoring wells will be installed  
10      in the vicinity of the Sue E Pit to monitor groundwater  
11      quality.

12              The McClean Lake Operation Preliminary  
13      Decommissioning Plan and Financial Assurance document has  
14      been updated to include the future decommissioning of the  
15      Sue E open pit. This document has been accepted by both  
16      Saskatchewan Environment and CNSC staff. The level of  
17      financial assurance required based on the recent  
18      recalculation of decommissioning costs remains at \$35  
19      million Canadian. It is provided through irrevocable  
20      letters of credit to Saskatchewan Environment.

21              Generally, the increases in decommissioning  
22      costs related to the excavation of the Sue E pit were  
23      offset by the reduced backfill volumes required for the  
24      JEB TMF which resulted from the increased tailings  
25      deposited from the processing of Sue E ores.

1                   The planned Sue E project schedule is  
2                   presented in this slide. The environmental assessment  
3                   process was completed in July of 2005 and a subsequent  
4                   one-day commission hearing to consider weather-sensitive  
5                   work allow preparatory activities to proceed. If a  
6                   decision authorizing Sue E development is made in the  
7                   fourth quarter of 2005 in response to this licence  
8                   amendment application, waste rock mining will commence  
9                   following the completion of preparatory work. Mining is  
10                  anticipated to take approximately 30 months. Ore will  
11                  begin to be processed at the JEB Mill soon after it is  
12                  encountered in 2007 and will continue through 2008 and  
13                  beyond.

14                  The proposed Sue E development will provide  
15                  additional ore supply for processing at the JEB Mill and  
16                  consequently will provide positive economic employment and  
17                  business opportunities particularly to northern  
18                  Saskatchewan. COGEMA successfully mined the Sue C and JEB  
19                  open pits and has used this experience in the design of  
20                  the SUE E open pit and its planned operation. Mining the  
21                  Sue E ore body and processing the ore represent a  
22                  continuation of the type of activities already approved at  
23                  McClellan Lake. These activities have been successfully  
24                  carried out with high levels of protection for both  
25                  workers and the environment.

1                   In conclusion, COGEMA Resources requests an  
2 amendment to the CNSC operating licence for the McClean  
3 operation to allow mining of the Sue E open pit and  
4 subsequent processing of the uranium ore at the JEB Mill.

5                   We will be pleased to answer any questions  
6 which members of the Commission may have.

7                   This concludes our presentation, Madam  
8 Chair.

9                   **THE CHAIRPERSON:** Thank you, Mr. Pollock.

10                  We will now move, then, to the presentation  
11 by CNSC staff as outlined in CMD document 05-H19. I will  
12 turn to Mr. Barclay Howden, the Director General  
13 responsible.

14                  Mr. Howden, you have the floor.

15  
16                  **05-H19**

17                  **Oral Presentation by**

18                  **CNSC staff**

19                  **MR. HOWDEN:** Thank you, Madam Chair,  
20 members of the Commission.

21                  For the record, my name is Barclay Howden.

22                  With me today are Mr. Kevin Scissions,  
23 Director of the Uranium Mines and Lands Evaluation  
24 Division, Mr. Rick Forbes, Project Officer for the McClean  
25 Lake Operation and the rest of the CNSC's licensing team

1 for this project.

2 COGEMA has applied to amend the McClean  
3 Lake uranium mine and mill operating licence to allow them  
4 to proceed with mining and milling of the Sue E ore body.  
5 This presentation contains an assessment of the  
6 Application and staff's recommendation for the amendment  
7 of the licence.

8 I will now ask Rick Forbes to present an  
9 overview of the information recommendations prepared by  
10 staff.

11 **MR. FORBES:** Good morning, Madam Keen and  
12 Commission members.

13 For the record, my name is Rick Forbes. I  
14 am the CNSC's Project Officer for the McClean Lake  
15 operation.

16 This presentation will provide an overview  
17 of the approved activities and the requested amendment  
18 activities. CNSC staff's program assessment, an  
19 assessment of the requested activities will be discussed.  
20 I will then present CNSC staff's conclusions and  
21 recommendations.

22 This slide summarizes the recent licensing  
23 activities concerning McClean Lake. The licence was  
24 renewed in 2005, including permission to construct the JEB  
25 Mill expansion that was required to be able to mill the

1 Cigar Lake ore in the future. The milling of Cigar Lake  
2 ore would require a separate licence application. The  
3 licence was effective May 19, 2005.

4 The first amendment was for the Mine  
5 Equipment Development Test Program. This is for a limited  
6 test of five drill holes from surface on pod one of the  
7 McClean ore body. The designated officer's decision was  
8 issued as an amendment on June 10<sup>th</sup>, 2005.

9 The second amendment was for weather-  
10 sensitive preparatory work for the proposed Sue E please  
11 note that the second amendment on the slide should read  
12 ".02" not ".03".

13 The Commission panel held a one-day public  
14 hearing on July 13<sup>th</sup> of 2005. The Reason for Decision was  
15 issued on July 21<sup>st</sup>, 2005. We are therefore before the  
16 Commission for the third amendment.

17 The approved activities in the current  
18 uranium mine and mill operating licence therefore include  
19 mill ore at an annual rate of 3.6 million kilograms per  
20 year of use/year weight.

21 Mine Sue A and B pits produce and ship a  
22 uranium concentrate, modify the JEB Mill for the proposed  
23 Cigar Lake ore milling. In addition, the testing of mine  
24 equipment in McClean ore body Pod 1 was approved by a  
25 designated officer on June 10<sup>th</sup>, 2005.

1                   This photo taken at the last inspection is  
2 of the mine equipment development area at Pod 1 of the  
3 McClean ore body where the drill pad is being prepared.

4                   Finally, the Sue E weather-sensitive work  
5 was approved by the Commission panel on July 22<sup>nd</sup>, 2005  
6 with the licence amendment. This includes the partial  
7 dewatering and infilling of Sills Lake, as well as  
8 associated roads, pipelines, and the relocation of the  
9 SaskPower power line.

10                  At present, COGEMA has started on the  
11 access and pipeline. CNSC staff will review the hydrology  
12 and geotechnical information from COGEMA before making a  
13 decision on the approval of Sills Lake dewatering, as  
14 covered in the licence amendment.

15                  The requested activities in this  
16 application for the third amendment are open-pit mine, the  
17 Sue E ore body, including the mining and disposal of the  
18 clean waste and special wastes; the mining of the ore; the  
19 storage at the Sue E ore pad and the rehandling to the JEB  
20 Mill for processing; the associated services, including  
21 the dewatering at the proposed pit; water treatment; the  
22 maintenance and service facilities at the Sue site.

23                  This drawing shows the Sue mine site. The  
24 Sue C pit is in the centre. The Sue A pit to the top  
25 right of the Sue C pit is presently being mined. The

1 proposed Sue E mining site is to the south of the Sue C  
2 pit. The proposed clean waste dump is to the left and the  
3 overburden filling of Sills Lake would be to the right.

4 The photo taken at the last inspection is  
5 of the proposed Sue E mining area looking east. The water  
6 body is the north end of Sills Lake. The proposed pit  
7 would be approximately where the photo was taken to Sills  
8 Lake, which is about 350 metres.

9 CNSC staff conducted an assessment for the  
10 review period of September 1<sup>st</sup>, 2001 to October 1<sup>st</sup>, 2004  
11 for CMD-05-H2 to determine whether the Applicant was  
12 qualified and had made adequate provision for the  
13 protection of the environment, health and safety of  
14 persons and maintenance of national security and  
15 international obligations.

16 CMD-05-H19 for this application updates the  
17 assessment, based on performance from October 1<sup>st</sup>, 2004 to  
18 March 31<sup>st</sup>, 2005. COGEMA has made satisfactory progress  
19 on the quality assurance, training and radiation audit's  
20 findings.

21 CNSC staff has reviewed COGEMA's documents  
22 and is satisfied that adequate progress has been made to  
23 upgrade the implementation rating from C to B.

24 The radius for each program area are  
25 summarized in this table. All program areas and the

1 program and implementation rated as B. The mill has  
2 operated throughout the period with a short Christmas  
3 shutdown. There were three Type 2 inspections done during  
4 the review period by CNSC and three Type 2 inspections by  
5 the Saskatchewan Environment Project Officer, as a  
6 qualified CNSC inspector. The inspections showed  
7 consistent compliance.

8 The 2004 annual report for the Tailings  
9 Optimization Validation Program was submitted by COGEMA  
10 July 25<sup>th</sup>, 2005 and is currently under review by CNSC  
11 staff. There were no radiation protection regulatory or  
12 reportable administrative level exceedences during the  
13 report period. The inspection showed consistent  
14 compliance for radiation protection.

15 There were no environmental regulatory  
16 exceedences, one environmental action level exceedence and  
17 one reportable spill during the reporting period. The  
18 action level exceedence was a JEB-treated pond discharge  
19 with a pH of 9.4. The spill was a 4.5 cubic metre spill  
20 from the Sue sedimentation ponds, which was cleaned up  
21 immediately.

22 The mass loadings of the effluent to the  
23 environment continue to be well under the administrative  
24 levels. COGEMA has reduced the molybdenum in the treated  
25 effluent from .25 to .15 milligrams per litre during the

1 reporting period. The inspection showed consistent  
2 compliance for environmental protection.

3 There were no lost-time accidents or  
4 dangerous occurrences during the reporting period. The  
5 inspection showed consistent compliance for non-  
6 radiological health and safety protection.

7 For the remaining safety areas there has  
8 been no change.

9 A one-day Commission public hearing was  
10 held June 29<sup>th</sup>, 2005 to consider the Environmental  
11 Assessment Screening Report for the Sue E mining, as  
12 outlined in CMD-05-H13. In the Reasons for Decision  
13 issued July 12<sup>th</sup>, 2005 the Commission concluded that the  
14 project, taking into account the mitigation measures  
15 identified in the screening report, is not likely to cause  
16 significant adverse environmental effects.

17 The assessment of the requested activities  
18 shows the mining of Sue E is a continuation of the Sue  
19 mining area. COGEMA has used the experience from the  
20 mining of Sue C pit, as well as additional geotechnical  
21 information, for the design of the Sue E pit. They have  
22 used consultants to evaluate the information to finalize  
23 the design criteria. The same equipment, mining methods  
24 and facilities will be used for the proposed mining of Sue  
25 E.

1                   COGEMA has planned to mine Sue E  
2 immediately after its Sue A mining. The same policies,  
3 procedures and work instructions are to be used for Sue E  
4 mining. CNSC staff was to update the Commission on the  
5 preliminary decommissioning plan at this hearing, as  
6 stated in section 6.1 of CMD-05-H19. The plan has been  
7 reviewed by CNSC staff and found to be acceptable. A  
8 letter to the licensee was issued August 10<sup>th</sup>, 2005. The  
9 financial assurance remains at \$35 million.

10                   Based on CNSC staff's assessment in the  
11 CMD, CNSC staff concludes that the proposed activities  
12 have already been included in the recently approved  
13 environmental assessment. COGEMA is qualified to carry on  
14 activities, including the requested activities that the  
15 proposed amended licence will authorize. COGEMA made and  
16 is expected to continue to make adequate provision for the  
17 protection of the environment, the health and safety of  
18 persons and COGEMA made, and is expected to continue to  
19 make, adequate provision for the maintenance of security  
20 and the implementation of international obligations.

21                   To conclude, CNSC staff recommends that the  
22 Commission proceed with the course of action consistent  
23 with paragraph 20.1(a) of the CEAA. That course of action  
24 would be consideration by the Commission under the NSCA of  
25 the application by COGEMA to proceed with open-pit mining

1 and milling of the Sue E ore body.

2 Accept CNSC staff's assessment that the  
3 Applicant is qualified to carry on activities that the  
4 amended licence will authorize and will make adequate  
5 provision in carrying out those activities for the  
6 protection of the environment, the health and safety of  
7 persons and the maintenance of national security and  
8 measures required to implement international obligations  
9 to which Canada has agreed, and amend the current uranium  
10 operating licence UMOL Mine Mill McClean .02 2009 to allow  
11 the mining and milling of the Sue E ore body to proceed  
12 and to update the Appendix B documents.

13 I would now like to turn it back to Mr.  
14 Howden.

15 **MR. HOWDEN:** Thank you.

16 Madam Chair, that concludes our  
17 presentation. We are ready to respond to questions.

18 **THE CHAIRPERSON:** Thank you.

19 The floor is now open for questions. I  
20 would like Dr. Barnes to start please.

21 **MEMBER BARNES:** I can't resist asking who  
22 is Sue; do we know?

23 **(LAUGHTER)**

24 **MR. POLLOCK:** Bob Pollock for the record.

25 I suspect Jim knows that history. He has

1           been with this project for a long, long time.

2                   **MR. CORMAN:** As is the custom for most  
3           deposits in Northern Saskatchewan, they are named after  
4           either wives or mistresses of geologists or exploration  
5           people. This was a wife, the wife of the vice-president  
6           of exploration.

7                                   **(LAUGHTER)**

8                   **MEMBER BARNES:** In your presentation you  
9           have figure 5.1 on page 20 and 5.2 on page 27 and I would  
10          like to know why the relationship of the Sue E Pit and  
11          Sils Lake is different? I presume from other diagrams --  
12          5.2, you see, has Sils Lake right up against the shoreline  
13          of Sils Lake up against the edge of the pit. It would be  
14          interesting how the error came about.

15                   **MR. POLLOCK:** Bob Pollock for the record.

16                                   In figure 5.2 on page 27 this shows the  
17          configuration of Sils Lake as it naturally exists with the  
18          pit overlain onto the drawing so that you can see that  
19          they are not -- in fact there is perhaps a very slight,  
20          even overlap there for a short distance at the border  
21          between the pit and the lake.

22                                   If we then go back to figure 5.1 it's the  
23          same figure only the overburden stockpile has now been  
24          overlain on top of Sils Lake. So the first figure 5.1  
25          shows what the configuration will be, or very close to

1        what it will be. This is a conceptual level figure so the  
2        precise boundary will be somewhat different in the final  
3        design. But it shows conceptually when the overburden  
4        stockpile has been used to partially infill Sils Lake what  
5        that configuration will be.

6                    **MEMBER BARNES:** But again, I am going from  
7        memory from -- our previous meetings have been quite  
8        regular here, right. Sils Lake has come before us before.  
9        But I always thought there was a distance between the edge  
10       of the mine, proposed edge of the pit, and Sils Lake, as  
11       opposed to it actually virtually being the same in your  
12       answer.

13                   **MR. POLLOCK:** Bob Pollock for the record.  
14                   I believe these figures are accurate. I  
15       will ask Jim if he could confirm that. Certainly, the  
16       reason for this partial infilling is in fact to establish  
17       a separation between the edge of the pit and what will  
18       become the edge of the lake once we're actually doing the  
19       pit development.

20                   **MR. CORMAN:** Jim Corman for the record.  
21                   That's correct what Bob said. Prior to  
22       development of the pit Sils Lake is right next to the  
23       perimeter of the pit. Once we place the till into the  
24       lake it will develop that distance at a minimum of about  
25       200 meters between the lake itself and the pit.

1                   **MEMBER BARNES:** Thanks.

2                   With the waste stockpile how high would you  
3 anticipate that stockpile to be?

4                   **MR. CORMAN:** The height of the waste  
5 stockpile will be about 10 meters on its first lift.  
6 Depending on our ability to segregate clean from special  
7 waste we may need to put a second lift on top of that, but  
8 the design right now is a single 10-meter lift.

9                   **MEMBER BARNES:** And you've raised that  
10 issue before, the issue of -- or the problem of separating  
11 those two, and if it's not then you would put a fair  
12 amount of the clean waste into Sue C Pit; correct?

13                   **MR. POLLOCK:** Bob Pollock for the record.

14                   Yes, that's correct. Ideally, one would be  
15 able to separate precisely the special waste from all of  
16 the clean waste rock. Should that become operationally  
17 problematic than it's important to make sure that that  
18 clean waste stockpile is in fact clean waste. So if we  
19 can't be confident of the segregation we will put  
20 additional clean materials mixed with the special waste  
21 into Sue C.

22                   **MEMBER BARNES:** Can you comment on the  
23 capacity of the Sue C to take this potentially added  
24 volume of clean waste?

25                   **MR. POLLOCK:** Bob Pollock for the record.

1                   Yes, I don't recall the precise numbers.  
2                   My recollection is that they were in the environmental  
3                   assessment documentation. But there is about 4 million or  
4                   4.3 million cubic meters of total waste rock below the --  
5                   down to a horizon about 4.18 or probably 4.10 meters above  
6                   sea level. We are quite confident we are dealing with  
7                   basically clean sandstone. Below that is where it may  
8                   become difficult.

9                   In the environmental assessment we  
10                  considered extremes both ways. We have considered one  
11                  extreme being that we were able to effectively segregate  
12                  all of the clean waste rock and only put something in the  
13                  order of 180,000, originally in-Situ, cubic meters in the  
14                  Sue C and the other extreme was for, I think, it was for  
15                  4.3 million cubic meters. So we believe we've covered the  
16                  possible range that could result even if we're totally  
17                  unsuccessful in doing any segregation below the level that  
18                  we can get to with confidence.

19                  **MEMBER BARNES:** On page 30 under 7.1.2,  
20                  Environmental Management, you talk about the groundwater  
21                  monitoring. Additional groundwater monitoring wells will  
22                  be installed in the vicinity of the Sue E Pit to simply  
23                  monitor groundwater quality. That is the last two lines  
24                  of that page 30.

25                  How many wells would you be anticipating?

1                   **MR. CORMAN:** Jim Corman.

2                   We're looking at an installation of three  
3 to four additional groundwater monitoring wells. Three in  
4 the lower sandstone and one being a nested structure, a  
5 nested piezometer between the pit itself and Sils Lake, so  
6 a deep piezometer and one up in the till.

7                   **MEMBER BARNES:** Okay.

8                   And to staff on page 8 under  
9 "Decommissioning" unless I -- you might have coded it and  
10 I missed it in your presentation, but the last line of 6.1  
11 is that "CNSC can now complete our review and the  
12 Commission will be updated at Public Hearing Day One."  
13 Did you and I missed it, or didn't you and why?

14                   **MR. FORBES:** Rick Forbes for the record.

15                   Yes, it was in the presentation, but for  
16 your information we did review the decommissioning plan  
17 and we found it acceptable. A letter was issued on August  
18 the 10<sup>th</sup> accepting the decommissioning plan.

19                   **MEMBER BARNES:** Okay. Thanks.

20                   **THE CHAIRPERSON:** Dr. McDill.

21                   **MEMBER McDILL:** Thank you.

22                   If I may, I would like to ask questions  
23 following up on the panel with respect to the weather-  
24 sensitive work. Has anything occurred and do you have any  
25 updates on potential outflow from Sils Lake or the perched

1 lake, and maybe staff could follow up.

2 **MR. POLLOCK:** Bob Pollock for the record.

3 Yes, we have started some of the  
4 preliminary work associated with clearing rights of way  
5 and constructing the pipeline. We have also -- we in  
6 fact, Madam Chair, have a couple of photos here that we  
7 could illustrate. In order that to be part of the future  
8 public record we could attach whatever we show here now as  
9 an annex to our Day Two presentation.

10 So maybe we will start with a couple of  
11 pictures. I will ask Jim to speak to the pictures and  
12 then we will come back. We have also done extensive work  
13 on this question of the lake outflow and we will come to  
14 that as a second part of our response here.

15 **(SHORT PAUSE)**

16 **MR. CORMAN:** This first picture that I am  
17 showing is our clearing of the right of way for our power  
18 line relocation. You can see right on the crest here our  
19 existing stand for the power line feeding the site and the  
20 new cleared right of way.

21 This second picture is the clearing of the  
22 access down to Sills Lake. This is the north basin of  
23 Sills Lake and this will be the right-of-way for the  
24 pipeline that will be installed for the dewatering of  
25 Sills prior to the placement of the till.

1                   This is some of the pipeline that is being  
2 fused together for use for the dewatering of Sills Lake  
3 activity.

4                   This figure here is an update following our  
5 last hearing of an air photo that shows the Sills Lake  
6 location here where the Sue E pit will be and an  
7 identified outflow, an intermittent creek that flows out  
8 of the south end of Sills Lake downstream. That creek  
9 will be continued to be accessible to maintain the water  
10 level in the south basin of Sills Lake.

11                   **MR. POLLOCK:** Bob Pollock for the record.

12                   We have also used the aerial photographs to  
13 extract from that a much more detailed topographical map  
14 showing the elevation contours at one-third metre, I  
15 believe it is, elevations and we didn't have anywhere  
16 close to this level of contour information compiled  
17 before. We knew this sort of creek bed was there but we  
18 didn't actually have the detailed contours, and you can  
19 see within the contour map where this -- what basically is  
20 an intermittent creek that flows down to the next small  
21 lake and also sort of through what, in effect, is a  
22 wetland area. So there is what turns out to be a natural  
23 control on the lake level with quite a large receiving  
24 area for any periodic water flow out of Sills Lake. So  
25 we're not disturbing that natural control on the elevation

1 of Sills Lake.

2 We were somewhat aware of this before, but  
3 we didn't have these detailed contours to conclusively  
4 demonstrate sort of that what you see had a solid physical  
5 explanation behind it.

6 **MEMBER McDILL:** So you are confident then  
7 that even filling in a significant portion of the lake  
8 there is sufficient capacity in the event of huge rains to  
9 not ---

10 **MR. POLLOCK:** Yes, we ---

11 **MEMBER McDILL:** --- have problems?

12 **MR. POLLOCK:** --- are not changing the  
13 overall boundaries of the watershed and we're not changing  
14 what, in effect, is a natural outflow mechanism from the  
15 lake into a large receiving area.

16 We haven't actually got the submission in,  
17 but we have discussed the substance of the submission,  
18 including these figures with the staff. So we're  
19 optimistic that we've got all the pieces pulled together  
20 for the submission.

21 **MEMBER McDILL:** Thank you.

22 I realize staff may not have had a chance  
23 to review it, but would you care to comment?

24 **MR. FORBES:** For the record, Rick Forbes.

25 We have been made aware of it and we're

1           awaiting the documentation to certainly evaluate it before  
2           we comment on it.

3                   **MEMBER McDILL:** Thank you, Madam Chair.

4                   **THE CHAIRPERSON:** Mr. Graham.

5                   **MEMBER GRAHAM:** Thank you.

6                   Just a follow-up on water treatment. Water  
7           treatment capacity, I believe, was given as going from  
8           7,200 metres to 10,000 metres because of this activity. I  
9           think I'm correct on that. And if I followed through the  
10          documentation, Sue E goes to Sue C to the sediment ponds,  
11          then to the water treatment plant and then it is treated  
12          and it is put into Sink and Venture -- Sink/Vulture  
13          Management System.

14                   Is this a tested -- excess rains and so on  
15          and the new groundwater that is coming out, is this water  
16          treatment designed to carry other activities that may come  
17          that are unforeseen like weather conditions and so on?  
18          And that is to CNSC staff.

19                   **MR. FORBES:** For the record, Rick Forbes.

20                   The biggest factor here is the holding  
21          capacity of Sue C pit. So that's the buffer that can  
22          control the water going to the water treatment plant. So  
23          there's tremendous capacity there.

24                   **MEMBER GRAHAM:** In other words then, it's  
25          all dependent on Sue C holding to make a steady flow.

1                   But the treatment plant is designed now to  
2 handle 10,000 metres, is it, instead of the 7,200?

3                   **MR. FORBES:** The treatment plant has been  
4 approved at 10,000 cubic metres a day and they have  
5 followed up with testing results to assure us that that is  
6 meeting our requirements.

7                   **MEMBER GRAHAM:** Another question, Madam  
8 Chair, with regard to the JEB Mill.

9                   Sulphuric acid is used in the tailing  
10 circuit. I believe that is correct?

11                  **MR. POLLOCK:** Bob Pollock for the record.

12                  Sulphuric acid, its primary use is to  
13 actually leach the uranium from the ground-up ore. One  
14 uses sulphuric acid, plus an oxidant is added as well,  
15 currently hydrogen peroxide, to become oxygen in the  
16 future, and that is used to leach the uranium from the ore  
17 and then we further purify it and make it into the final  
18 product.

19                  One also uses sulphuric acid to adjust the  
20 pH within the water treatment plants. It's a multi-step  
21 process that in different parts of the circuit, one has  
22 different pH conditions. So one uses acidic materials and  
23 basic materials to adjust the pH up and down in different  
24 parts of the circuit and precipitate out different  
25 potential contaminants at different pH levels. But its

1 primary use is as the leaching agent in the leach circuit.

2 **MEMBER GRAHAM:** My question was going to be  
3 will there be additional amounts of sulphuric acid used  
4 when the ore from Sue E comes out and goes to the mill?  
5 And how does that affect the whole water treatment and how  
6 is that dealt with?

7 First of all, is there going to be more  
8 sulphuric acid used than what there has in the past on a  
9 daily basis?

10 **MR. POLLOCK:** Bob Pollock for the record.

11 The ore grade that we're currently running  
12 through the mill is down at the point where we're -- in  
13 order to produce 6 million pounds a year, we are running  
14 the leach circuit at pretty much its maximum number of  
15 tonnes of ore per day and the tonnes of ore per day are  
16 what essentially drives the amounts of acid required.

17 So I believe the short answer is we're not  
18 going to substantially change the mass balance in terms of  
19 tonnage throughput. There will be some minor changes,  
20 presumably from one ore to another.

21 If you wish, perhaps -- is it practical to  
22 switch in Saskatoon here without major difficulty? If so,  
23 I would ask John Rowson to comment further on the details  
24 of the leaching process, but certainly in terms of  
25 tonnage, we are pretty much at the maximum throughput as

1 we speak.

2 **MEMBER GRAHAM:** The reason for you to do  
3 that -- and so that answer would be -- that assistance  
4 would be great.

5 My understanding is that the Sue E ore body  
6 is not as high a concentrate of uranium as what you're  
7 processing now, and by that, would you have to use more  
8 tonnes of ore or more tonnes of concentrate to get the  
9 same results? That's what I was coming at.

10 **MR. POLLOCK:** I think we probably should  
11 turn this over to John. I'm getting close to the limits  
12 of my competence for answering questions. But I believe  
13 we're pretty close to the maximum tonnage right now, so  
14 that, yes, if we could put twice as many tonnes through,  
15 we would, but we can't.

16 So perhaps John could comment further.

17 **THE CHAIRPERSON:** We will pass it to  
18 Saskatoon, please.

19 **MR. ROWSON:** The leach circuit in the JEB  
20 Mill has been designed to accommodate a large range of  
21 ores, some of which have a very large acid consumption and  
22 some are at a relatively small acid consumption.

23 And in the big picture, the Sue E acid  
24 consumption is in the lower range and so the facilities,  
25 the water treatment plant facilities, the tailings

1 management facilities can all accommodate readily the  
2 processing of Sue E ore.

3 **MEMBER GRAPHAM:** In other words, what  
4 you're saying then is that there will not be extra  
5 sulphuric acid required to extract or to mill this ore  
6 body. Is that what you're saying; that the quantities  
7 will not change significantly?

8 **MR. ROWSON:** Yes, the quantities will not  
9 change significantly. That's correct.

10 **MEMBER GRAHAM:** Thank you. One other  
11 question then: With regard to mining process -- and I  
12 asked this before and I know that it's been approved but  
13 the footprint is about 15 hectares but at the bottom of  
14 the pit it is certainly not that large.

15 At the bottom of the pit where you extract  
16 all of the ore in that -- all the proven ore in that body  
17 or will years to come have to join Sue E with Sue C and so  
18 on to spread out further?

19 **MR. POLLOCK:** Bob Pollock, for the record.

20 I'll ask Jim to comment in detail but Sue E  
21 is a discreet ore body. It's not like there's a  
22 continuous run of ore there and that we're sort of cherry  
23 picking out this piece now and this piece later. There  
24 are in effect discreet ore bodies.

25 Jim.



1 bit of a cursory basis to be honest, not a real thorough  
2 investigation. The size of our pits are relatively deep  
3 but with a fairly small footprint. As you've noted the  
4 bottom of the pit is quite small so the size that you need  
5 for a conveyor set up in the bottom sometimes is a little  
6 bit larger than what we would be able to use as a pit  
7 operation. We have some fairly steep slopes coming out of  
8 the pit that for a conveyor might be a little excessive.

9 The material, the ore material that we mine  
10 is a clay-rich sticky material which sometimes gives  
11 difficulty in a conveyor situation and the other -- the  
12 problem with a conveyor situation where if it does goes  
13 down, your production is suspended until it's repaired.

14 There are some problems with maintenance on  
15 conveyors in an ore, uranium mining situation where it's  
16 difficult to clean the conveyor to get at it, in some  
17 cases having higher exposure to your maintenance people  
18 than you would have with an equipment operation.

19 **THE CHAIRPERSON:** Mr. Taylor.

20 **MEMBER TAYLOR:** Thank you, Madam Chair.

21 I think most of my questions have already  
22 been asked but just one.

23 For the licensee, on page 15 of your  
24 presentation you talk about predicted average total  
25 effective dose and similarly on Table 7.1, which is page

1 32 of the CMD, you have a table which estimates radiation  
2 dose.

3                   Could you just confirm the units, that  
4 these are milliSieverts per year?

5                   **MR. POLLOCK:** Bob Pollock, for the record.

6                   In the case of Sue E, they are actually  
7 both milliSieverts for the project and milliSieverts per  
8 year, because if you look at a couple of pages later on at  
9 our schedule, we're projecting all of the ore mining to be  
10 done during the calendar year of 2007. So it turns out  
11 that it didn't matter whether we call them milliSieverts  
12 per year or milliSieverts for the project. They're  
13 coincidentally the same for this particular schedule.

14                   **THE CHAIRPERSON:** Dr. Dosman.

15                   **MEMBER DOSMAN:** Thank you, Madam Chair.

16                   I would just like to ask, on the  
17 organizational chart on page 11 of the presentation where  
18 does safety come in? I see where safety and training  
19 comes in on the previous figure on page 10, but on the  
20 organization of the surface department would it be  
21 possible to describe where the safety training and  
22 management comes into this organizational chart?

23                   **MR. POLLOCK:** Bob Pollock, for the record.

24                   I'll ask Jim to elaborate but basically the  
25 site environment, if you go to the first of those two

1 organizational charts, the one that sort of shows  
2 organizational management both for the corporate office  
3 and for the site down to the level of the five major  
4 departments, you can see that one of the major departments  
5 is headed by the Environment, Health and Safety  
6 Superintendent. So within that department one has the  
7 senior professional staff that heads the environment  
8 group, the senior staff for safety, the senior staff for  
9 radiation protection and then a number of -- you know, for  
10 example, in safety one would have safety officers and  
11 other safety support people.

12 So all of the environmental, health and  
13 safety support people are at the site. They provide that  
14 service for mining. They provide it for milling. They  
15 provide it for all of the site activities. So it comes  
16 through the Environment, Health and Safety Department as  
17 opposed to being directly part of the mining department.

18 Jim could probably elaborate a bit better  
19 than I on the actual interface.

20 **MR. CORMAN:** As Bob mentioned, the safety  
21 group specifically reports into and up to the EH&S  
22 superintendent on a site-wide basis. Each department as  
23 such, the mill department, the mine department, our  
24 surface department, the superintendent is responsible for  
25 the safety of his department. The crew foreman is

1 responsible for the safety of his crew. Each individual  
2 is responsible for their own safety.

3 It is overseen by the EH&S department.  
4 They act as a resource. The safety people come out and do  
5 workplace inspections. They check our five-point safety  
6 card system. They act as supplying reference material for  
7 safety presentations to the crews.

8 So it's coordinated through the EH&S  
9 Superintendent. We have daily meetings at 9 o'clock every  
10 morning with all the department heads, with the  
11 representative from the EH&S department and they discuss  
12 any issues that come up on a daily basis as well.

13 **MEMBER DOSMAN:** Sorry, if I might?

14 So how does it work on the ground so to  
15 speak? On page 11, the blasting contractor, for example,  
16 comes on site. How does the company ensure that  
17 appropriate standards of training and safety are in place;  
18 for example, the blasting contractor, the procedures  
19 adhering, safety boots, all of that. How do you ensure  
20 that there are adequate standards?

21 **MR. CORMAN:** The blasting contractor  
22 reports to the mine operations' general supervisor. The  
23 general supervisor considers the blasting contractor  
24 essentially as just another part of his crew. They are  
25 required to comply with all of our safety requirements on

1 our site as we require all of our employees, the safety  
2 PPE gear. They need to participate in our safety huddle  
3 process. Our workplace inspections have representation or  
4 participation in our OH&S programs as well. So they are  
5 essentially considered. Although they are a contractor  
6 they work very closely with the operations people and  
7 essentially are considered as part of the crew.

8 **MEMBER DOSMAN:** I wonder if I might ask  
9 CNSC staff, with regard to the safety inspections how  
10 frequently are they carried out? Presumably, CNSC staff  
11 doesn't have a full-time safety officer onsite, or do we?

12 **MR. FORBES:** Rick Forbes for the record.  
13 CNSC inspections occur approximately four  
14 to six times a year. We also are harmonizing with the  
15 province at SASK Labour and we utilize their people as  
16 well for inspections and when we are onsite we inspect the  
17 company workers as well as the contract workers, and  
18 looking at their programs as well.

19 **MEMBER DOSMAN:** If I might, Madam Chair,  
20 you mentioned in your presentation that during a safety  
21 inspection a member of the Occupational Health Committee  
22 accompanies the inspection. I would just like to ask how  
23 regularly that occurs. Does it really happen and also is  
24 that member a member of management or a member of the  
25 labour and how successful is this process?

1                   **MR. FORBES:** Rick Forbes for the record.

2                   We utilize the OEC representative on every  
3 inspection, and that is a worker representative. That has  
4 been very successful. I would like to note that SASK  
5 Labour started this practice and utilize it on a regular  
6 basis as well, too, but it is very effective.

7                   **MEMBER DOSMAN:** Would you be able to  
8 comment on how CNSC staff interfaces with SASK Labour in  
9 ensuring of CNSC standards?

10                  **MR. FORBES:** Rick Forbes for the record.

11                  We have trained the SASK Labour inspectors  
12 in a systematic approach to inspections, including a check  
13 sheet of all the safety and control areas that they are  
14 responsible for, and that's broken down into detailed  
15 elements. They report on those on every session -- every  
16 inspection that they do with the details of the findings  
17 and conclusions that come out. So it's well documented.

18                  **MR. SCISSONS:** If I can add? Kevin  
19 Scissons.

20                  If I can add to it, when we talk about the  
21 training of course we are bringing that in relation to the  
22 CNSC requirements or needs. Of course, SASK Labour has  
23 their own process of training and qualified inspectors for  
24 Saskatchewan Labour regulations which is above and beyond  
25 or on top of CNSC's requirements or expectations for

1 inspection of non-radiological health and safety issues.

2 **MEMBER DOSMAN:** Madam Chair, would it be  
3 appropriate to take the time -- is there a SASK Labour  
4 representative on site in the CNSC office in Saskatoon and  
5 may we ask that person to comment on their view as to the  
6 effectiveness of the arrangement?

7 **THE CHAIRPERSON:** Mr. Becker?

8 **DR. BECKER:** Hi, Ernie Becker, Saskatchewan  
9 Labour.

10 The signs says "microphone off". I'm not  
11 sure whether you are hearing me.

12 Saskatchewan Labour's regulations have a  
13 great deal of detail on blasting and the requirements for  
14 blasters. In addition to the inspections we have a system  
15 whereby someone who wishes to blast has to first of all be  
16 authorized by the company. In addition to that, the  
17 blasters have to write an exam, a Saskatchewan Labour  
18 exam, to become qualified blasters. The exam is based  
19 around the approximately 10 pages of detailed regulation  
20 on blasting. That's quite apart from some of the other  
21 requirements like supervision whereby the open pit  
22 supervisors have to, again, pass a Saskatchewan Labour  
23 exam in order to supervise.

24 In addition to all of that, of course, we  
25 do regular inspections with the Occupational Health

1 Committee worker representative and, if the company  
2 wishes, they can also send their employer representative  
3 along but we insist on the worker representative and have  
4 done that for many years.

5 **MEMBER DOSMAN:** Madam Chair, if I might?

6 Thank you for that information. My  
7 question, however, doesn't relate specifically to blasters  
8 but to how effective the relationship between SASK Labour  
9 staff and CNSC staff is in conducting inspections on  
10 behalf of CNSC and the CNSC's requirements. Would you be  
11 willing to comment on that aspect, Dr. Becker?

12 **DR. BECKER:** Well, I think as Mr. Forbes  
13 has already said, we have had extensive training of  
14 Saskatchewan Labour inspections by the CNSC. We have done  
15 a considerable number of joint inspections and continue to  
16 do joint inspections with the CNSC officials. We also do  
17 quite a number of inspections on our own as well.

18 At this stage, we are still working our way  
19 through the harmonization agreement. We are largely using  
20 the CNSC reporting format. Occasionally, we still revert  
21 back to some of the Saskatchewan Labour reporting formats  
22 but the harmonization is proceeding and we have quite a  
23 number now of qualified CNSC inspectors on our staff.

24 **MEMBER DOSMAN:** Thank you.

25 Madam Chair, I wonder if I might ask the

1 company?

2 With the open pit mining with regard to  
3 safety of the operators of the trucks, the vehicles that  
4 extract the ore from the pit, from a safety point of view  
5 how dangerous is this for the operators? Have you ever  
6 had one of these vehicles go over the edge and fall down  
7 into the pit?

8 **MR. POLLOCK:** Bob Pollock for the record.

9 Jim could elaborate. We have not had an  
10 incident where somebody has driven a truck literally sort  
11 of off the ramp or over the edge. We did have one  
12 occurrence which in my recollection it was actually  
13 reported within the Significant Development Report  
14 framework during the mining of Sue C where an engine  
15 failed on a truck while it was exiting the pit with a load  
16 and it wasn't adequately secured and ran away on its own  
17 back down the ramp and went off and fell down to the next  
18 -- to the bench below. So there was no injury of anybody  
19 and had the truck been properly secured it wouldn't have  
20 run away empty. So there was no injury and we have  
21 pursued quite vigorously the actions to ensure that  
22 vehicles are properly secured when placed on steep grades.

23 So I believe it's fair to say and I think  
24 the record demonstrates it, that providing people are well  
25 trained and, as I mentioned, we have now acquired a

1 simulator to assist in the training. Provided people are  
2 well trained the procedures themselves are well developed  
3 and well thought out. So I don't see any high levels of  
4 risk there. Like many things, though, if one ignores the  
5 safe way to do things you can almost always find an unsafe  
6 way to do something in regards whether you are home in  
7 your basement or driving a large mining truck.

8 Jim.

9 **MR. CORMAN:** Just to add to Bob's comment,  
10 we did have an incident with the haul trucks in the past  
11 and we identified the need for testing and kind of  
12 exposing operators to those kinds of situations, emergency  
13 situations and how they would handle them.

14 Now, it's very dangerous to simulate in  
15 real life an engine failure going down the ramp. That's  
16 why we have pushed in the start of mining again to have a  
17 simulator brought to site wherein we can put the operator  
18 in the cab of the simulator and simulate engine failures  
19 going down ramps; blown tires going down ramps and  
20 situations where they typically wouldn't be exposed to  
21 something like that. It gives them the ability to at  
22 least see what their reactions would be and for us then to  
23 coach them as to what would be the proper things to do.  
24 Then, we run them through that a few times so that if it  
25 does happen in the future they have at least -- they have

1 got some awareness as to what needs to be done.

2 You can explain to people what you should  
3 do in an emergency situation but until you have really  
4 been exposed to it some people don't react quite the way  
5 that you would expect. So this gives us the ability to at  
6 least try to expose these guys to these kinds of things  
7 without endangering them.

8 We have been fortunate in being able to  
9 bring back probably about 85 per cent of our previous  
10 equipment operators so we have got a crew coming to site  
11 that is familiar with the equipment and the pit conditions  
12 that we have.

13 So the simulator training was done  
14 specifically for, you know, exposing these guys to these  
15 kinds of emergency situations.

16 **MEMBER DOSMAN:** Madam Chair, I have asked a  
17 number of questions. How is our time?

18 **THE CHAIRPERSON:** I will just perhaps  
19 check.

20 Is there any follow-up questions? So it  
21 rests with you, Dr. Dosman, and then I have a couple.

22 **MEMBER DOSMAN:** As to the radiologic safety  
23 of the loaders, of the people who operate the loaders down  
24 in the pit, loading the ore and the dosage they receive,  
25 do you have to rotate those operators in order to keep

1           their yearly dose down? Or how do you manage the  
2           radiation dose for those workers?

3                       **MR. CORMAN:** Jim Corman, for the record.

4                       We monitor very closely exposures of all of  
5           our workers, the loader operators, the truck drivers, the  
6           dozer operators. We do not have a situation where we have  
7           to rotate employees. We set up mining situations where we  
8           can keep our exposures to very low levels by working on  
9           top of the ore with shielding in the floors of cabs, as  
10          opposed to putting, say, a loader at a face of high-grade  
11          ore or a shovel at a face. So we typically try to  
12          -- depending on the layout of the ore body itself, we  
13          adjust our mining methods to minimize our exposure.

14                      So our loader operators consistently get  
15          more or less almost the same as what truck drivers get,  
16          maybe a little bit higher.

17                      **MEMBER DOSMAN:** Thank you.

18                      And I note that all of the ore will be  
19          extracted literally within the calendar year of 2007 and  
20          Sue E will be fully mined?

21                      **MR. CORMAN:** That is our intent.

22                      **MEMBER DOSMAN:** And perhaps it has been  
23          discussed -- but then what -- and then you have a  
24          timetable, by the end of 2008 the ore is mostly extracted  
25          to the JEB Mill and so on?

1                   **MR. POLLOCK:** Bob Pollock, for the record.

2                   Actually, I think if you look closely at  
3 the diagram it shows an arrow that extends beyond the end  
4 of 2008. It would go at least into 2009 for the  
5 processing of the ore.

6                   Again, we can only put so many tonnes per  
7 day through. So if you divide the total mass in tonnes of  
8 the ore by about 500 tonnes per day, that gives about the  
9 number of days that it would take to process, if that was  
10 the only ore going through the mill.

11                   **MEMBER DOSMAN:** I don't suppose it is a  
12 critical question, but is it the expectation that most of  
13 the ore will have been extracted and also milled during  
14 the current licence period following the proposed  
15 amendment?

16                   **MR. POLLOCK:** Yes, we will be -- our  
17 licence runs well into 2009, so it will be completed or  
18 close to completion.

19                   **MEMBER DOSMAN:** Well, there has been  
20 discussion of remediation of Sue E. So I take it -- would  
21 you be willing just to capsulize in a statement or two the  
22 plans for or refresh my memory on what will happen to Sue  
23 E.

24                   **MR. POLLOCK:** The environmental assessment  
25 that was previously developed for Sue E -- sorry, I should

1 have said Bob Pollock, for the record, starting here --  
2 depending on how successful we are in segregating clean  
3 material from special waste, we might -- if we do a good  
4 job of that or are successful, not a good job -- we will  
5 do a good job -- if we are successful in segregating a  
6 high proportion of the clean from the special, we probably  
7 will end up putting all of the waste rock that we are  
8 planning to dispose at McClean Lake back into the Sue C  
9 pit.

10                   Should we have to put a large whack of  
11 clean waste material from Sue E into Sue C, simply because  
12 we are not able to effectively segregate it, then  
13 ultimately we will need to put some of the material which  
14 is authorized for disposal at McClean Lake waste rock into  
15 Sue E.

16                   So it is possible that Sue E might  
17 ultimately have some waste rock backhauled into it.

18                   And the other thing that is, I think,  
19 becoming increasingly clear is that mined-out pits have an  
20 intrinsic value as a future facility in which to dispose  
21 of either waste rock or tailings. And there is not a lot  
22 of what one might call surplus open-pit capacity in the  
23 Athabasca Basin. So in the very long term -- and these  
24 are things that obviously will be subject to future  
25 assessments, future approvals. You know, mined-out pits

1 have an intrinsic attractiveness. If McClean is a  
2 reasonable processing facility that should happen to toll  
3 mill other ores that are yet to be found in the Athabasca  
4 Basin over the next 20, 30, 40, 50 years, it is quite  
5 likely that this pit will have a value and an appropriate  
6 ultimate use as a disposal facility for some type of  
7 problematic waste material, or potentially problematic  
8 waste material.

9 Now, it is hard to forecast what might  
10 evolve over several decades from now.

11 **MEMBER DOSMAN:** Thank you.

12 **THE CHAIRPERSON:** And we don't require you  
13 to do that.

14 Further questions?

15 Mr. Secretary.

16 **MR. LEBLANC:** This hearing is to be  
17 continued on October 19<sup>th</sup>, 2005 here in the CNSC offices.

18 The public is invited to participate either  
19 by oral presentation or written submission on Hearing Day  
20 Two. Persons who wish to intervene on that day must file  
21 submissions by September 19<sup>th</sup>, 2005.

22 The hearing is now adjourned to October  
23 19<sup>th</sup>, 2005.

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

25 The hearings will continue tomorrow at 8:00

1 a.m. The Commission meeting will start at 2:00 p.m. this  
2 afternoon.

3 Thank you very much for attending and safe  
4 trip home.

5 --- Upon adjourning at 12:20 p.m.

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