

1 (Proceedings reconvened at 9:50 a.m., April 13,  
2 2007)

3 MR. WILLIS: Good morning. I apologize  
4 for not starting right at 9:30. I presume that  
5 the additional time was useful for all  
6 concerned.

7 The process, and under our  
8 Rules, is that you've had the Response to  
9 Intervention, and this morning there will be the  
10 questions from the intervenors, the Board and  
11 the Board consultant; followed by closing  
12 remarks.

13 So, that being the case,  
14 questions from the Yukon Government.

15 **GOVERNMENT OF YUKON QUESTIONS KETZA RIVER HOLDINGS**

16 MR. MCDONNELL: Thank you, Mr. Chairperson.  
17 We've spent quite a bit of time reviewing the  
18 applicant's response to our intervention. We  
19 have a list of questions to clarify the  
20 applicant's understanding of our position, to  
21 respond to new information, and to clarify their  
22 intentions in their response.

23 We also feel that it is  
24 important to question their cost estimates in a  
25 line-by-line manner, since we have not seen  
26 their numbers before.



1           action the company took a year ago, under a  
2           notice of a water use without a licence, in  
3           which they discharged untreated water to  
4           alleviate what was becoming a dangerous  
5           situation of an overfull reservoir, that could  
6           result in an uncontrolled release, or worse, the  
7           following spring. In Exhibit 6.1, Yukon is now  
8           being labelled as inconsistent because of our  
9           current request for a slightly more stringent  
10          level of 0.3 milligrams per litre discharge.

11                           Our question to the applicant  
12          is whether you were advised, prior to the  
13          discharge, it was the view of Water Resources  
14          that the proposed action, to draw down the water  
15          level in the tailings pond, must be considered  
16          a one-time short-term solution designed to  
17          address a critical situation? Were you advised  
18          of that information?

19          MR. WILSON:                   Actually, we advised Water  
20          Resources that that would be our intention,  
21          until such time as a licence was in place, that  
22          we had standards to adhere to.

23          MR. TRUELSON:                This initiative, or project,  
24          was not put before the Board up to this point,  
25          it was brought out in your rebuttal to  
26          interventions. Water Resources can produce a

1 letter that more accurately details some of that  
2 information, but we won't, unless requested by  
3 the Board.

4 MR. WILLIS: Well, ultimately, at this  
5 point -- I mean, some of these things are more  
6 in the nature of a submission. Ultimately, the  
7 Board will hear from everything. I don't know  
8 if you're really going to -- I take it, from  
9 your position, I've just heard what you've said,  
10 I don't know if we can go much further on this  
11 issue.

12 MR. TRUELSON: Thank you. So, just to  
13 clarify that there is a letter that has that  
14 information specifically referencing the one-  
15 time, short-time solution, from the Chief of  
16 Water Resources to Ketza River Holdings, and  
17 I'll leave it at that.

18 MR. WILLIS: Can we just stop you there.  
19 Does the applicant disagree with that?

20 MR. POLYCK: No, we don't.

21 MR. WILLIS: Thank you. Then, for the  
22 record, we've got the facts.

23 MR. TRUELSON: Thank you. The second  
24 question on this issue is, would you agree that  
25 the primary management objective, in relation to  
26 this emergency drawdown, was to insure that a

1           certain level of arsenic concentration was not  
2           exceeded in the receiving water of Cache Creek?

3           MR. WILSON:                   No, at the time that we had  
4           meetings, I recall that we suggested that the  
5           water quality of the effluent be the objective  
6           that we could test and substantiate and,  
7           therefore, we conducted the fish bioassay, and  
8           we also monitored water on a bi-weekly basis  
9           during the drawdown. We recognize that we would  
10          try and achieve certain objectives downstream,  
11          but, really, the objective of testing the water  
12          was to insure water quality of the effluent.

13          MR. TRUELSON:               As I was involved on the  
14          government side, the regulator's side of that  
15          project, the submissions that I got from time to  
16          time were in reference to KR-8, and I'll leave  
17          it at that.

18                                       Was the applicant advised by  
19          Water Resources, at that time, that the total  
20          arsenic levels in the receiving environment, to  
21          be measured at sample site KR-8, were not to  
22          exceed 0.02 at any time during the discharge?

23          MR. WILSON:                   That is my recollection, yes.

24          MR. TRUELSON:               Is this not consistent with  
25          our position in our intervention, regarding the  
26          standard for KR-8?

1 MR. WILSON: I'm sorry, are we still on  
2 page 5, the discharge standard of .5 as opposed  
3 to .3?

4 MR. TRUELSON: Well, sorry, we're at the KR-  
5 8 site, still, a compliance point. Were you  
6 advised by Water Resources, at that time, that  
7 the levels at KR-8 sample site were not to  
8 exceed 0.02; and is this not consistent with our  
9 position in our intervention, regarding the  
10 standard for KR-8, is the question?

11 MR. WILSON: Yes, I understand that, in  
12 the letter that came back to the company, they  
13 had requested that water quality at KR-8 not  
14 exceed .02.

15 MR. TRUELSON: Thank you.

16 MR. WILSON: However, we had no chance to  
17 agree or disagree to that, that was an  
18 instruction given to us.

19 MR. TRUELSON: And is that not consistent  
20 with our present position for KR-8?

21 MR. WILSON: It is consistent with your  
22 position, yes.

23 MR. TRUELSON: Thank you. On page 6 of  
24 Exhibit 6.1, Ketz River Holdings does not agree  
25 with the recommendation that the original seep  
26 discharge standard of 0.05 arsenic be

1 maintained, but, rather, should be the same as  
2 a pond discharge --

3 MR. WILLIS: Mr. Truelson, once you start  
4 reading, you get going a little too fast.

5 MR. TRUELSON: Sorry. I'll start over  
6 again. Ketz River Holdings does not agree with  
7 the recommendation that the original seep  
8 discharge standard of 0.05 arsenic be  
9 maintained, but, rather, should be the same as  
10 a pond discharge of 0.5 milligrams per litre, so  
11 that the company only has to be concerned with  
12 one standard.

13 MR. WILLIS: Can I stop -- I'm just trying  
14 to make sure we're all -- which paragraph on  
15 page 6? Is it the page xv, KRH response, is  
16 that the one you're dealing with?

17 MR. TRUELSON: That's correct.

18 MR. WILLIS: Which is: "KRH does not agree  
19 with this recommendation. Sampling points KR-  
20 4...", etc.; that's the paragraph?

21 MR. TRUELSON: I'm keying on the discharge  
22 standard that they're proposing, .5. In other  
23 words, they're not agreeing with -- we made the  
24 statement that it should be the original  
25 standard of 0.05; Ketz River Holdings does not  
26 agree, and they're suggesting a discharge

1 standard of 0.5. That's in the first few lines  
2 of page 6.

3 MR. WILLIS: Okay, thank you.

4 MR. TRUELSON: Mr. Polyck, you made a remark  
5 yesterday, somewhat in passing, that, if  
6 anything, Ketz River Holdings was cleaning up  
7 the water at the site. And we've discussed some  
8 of the information over the past couple of days.  
9 We've seen some graphs about background levels  
10 of arsenic, in Cache Creek, that are somewhere  
11 around .015 to 0.02, which is above drinking  
12 water standards and is edging on the levels that  
13 can impact aquatic life. And so my question is,  
14 why do you think it is appropriate to rely upon  
15 an uncertain assimilative capacity in the  
16 receiving water, when you have the highly cost-  
17 effective technology, that was discussed, to  
18 treat water to drinking water standards?

19 MR. POLYCK: What I was referring to is,  
20 the past 16 years, there has been no treatment,  
21 no activity on the site, really, dealing with  
22 water. When the company pumps back seepage  
23 water into the tailings pond, treats the water  
24 and discharges it to a standard set by the  
25 Board, then we feel that's adequate.

26 In other words, what I'm

1           saying is, we're returning the water cleaner  
2           than we are discharging it -- or, sorry, we are  
3           -- from the tailings pond.

4       MR. TRUELSON:                    The seeps aren't at .5 now,  
5           they're usually below that. The pond water is  
6           at .5. And you've just suggested you're going  
7           to continue releasing at .5. I'll leave it at  
8           that.

9                                        Ketza River Holdings does not  
10          agree with the recommendation made by Yukon for  
11          .02 milligrams per litre arsenic in Cache Creek  
12          at KR-8, because of the sampling results  
13          upstream of the tailings being in excess of this  
14          concentration. Would the applicant agree that  
15          KR-8 is downstream of Oxo Creek?

16       MR. POLYCK:                    I don't think we've ever  
17          disputed that.

18       MR. TRUELSON:                    Would the applicant agree,  
19          also, that, because KR-8 is downstream of Oxo  
20          Creek, that it's reasonable to conclude that  
21          dilution accounts for the lower arsenic levels,  
22          at KR-8, than you find upstream at the  
23          background stations of KR-1 or KR-16?

24       MR. WILSON:                    We also see a change in  
25          arsenic between KR-1 and KR-16. I don't think  
26          we have the information to be able to

1           conclusively say that that's the case.

2           MR. TRUELSON:                   But you would agree that Oxo  
3           Creek is a significant dilution source, and you  
4           traditionally get lower numbers at KR-8 than the  
5           background stations?

6           MR. WILSON:                   Yes, we would agree that Oxo  
7           Creek is a dilution source.   Obviously, any  
8           water coming into there is going to add to the  
9           volume of water and, certainly, Oxo Creek does  
10          have good water quality in terms of arsenic  
11          content. As I mentioned before, anything coming  
12          in off the south side of that valley has  
13          relatively low arsenic concentrations.

14          MR. TRUELSON:                   Thank you.

15          MR. MCDONNELL:                Like to draw your attention  
16          to page 6, Exhibit 6.1, down at the bottom of  
17          the page, "KRH Response". It starts: "KRH does  
18          not agree with the statements in the Yukon's  
19          intervention in relation to dam stability and  
20          failure of water diversion structures." The  
21          part I'm drawing your attention to is the next  
22          sentence: "The dam has not exhibited instability  
23          in the 20 years it has been in place and has not  
24          been in danger of failure."

25                                        My question, is this the  
26          opinion of a qualified professional engineer

1 licensed to practise in the Yukon... that it has  
2 not been in danger of failure?

3 MR. POLYCK: No, I don't think any  
4 engineer has said that. What they've said is  
5 that the dam is stable, and that there was very  
6 few concerns, other than a few soft spots in the  
7 bottom of the dam, at KR-4.

8 That is our statement, I  
9 guess, in terms of the danger of failure, but,  
10 if the engineers agree with us, well, so be it.

11 MR. MCDONNELL: You have submitted two  
12 engineering reports recommending monitoring and  
13 maintenance, including construction of a toe  
14 berm; is that correct?

15 MR. POLYCK: Yes.

16 MR. MCDONNELL: In light of that, do you  
17 agree that you have an obligation to monitor and  
18 maintain the dam and diversion structures?

19 MR. POLYCK: I don't think we've disputed  
20 that fact, either.

21 MR. MCDONNELL: So you agree then?

22 MR. POLYCK: We agree.

23 MR. MCDONNELL: Do you think that Government,  
24 in the public interest, and especially to  
25 downstream users, also has a responsibility,  
26 under the *Waters Act*, to insure that dams remain

1 safe?

2 MR. POLYCK: Are you asking me personally,  
3 or the opinion of the company?

4 MR. MCDONNELL: I'm asking the company.

5 MR. POLYCK: That's up to the government,  
6 to decide how they approach these things.

7 MR. MCDONNELL: Do you currently have a  
8 written water structure monitoring and  
9 maintenance plan that you follow?

10 MR. POLYCK: No, as I said before, we have  
11 been doing these annual geotechnical  
12 inspections, and we're planning on continuing to  
13 do them. As far as a monitoring plan, no, we  
14 don't have one, specifically, but it's -- we  
15 don't really believe it's an onerous task to put  
16 one together.

17 MR. MCDONNELL: So, assuming that it's not an  
18 onerous task to put one together, would you  
19 object to having such a monitoring and  
20 maintenance plan in the water licence?

21 MR. POLYCK: No.

22 MR. MCDONNELL: On page 7 of Exhibit 6.1, I'd  
23 like to draw your attention to the top line,  
24 where it says: "Please note that KRH monitors  
25 and maintains all structures on a daily basis."

26 Can the applicant advise us

1           who was monitoring and maintaining, on a daily  
2           basis, from 1999 to 2003?

3       MR. POLYCK:                   KRH has only been on site, on  
4           a continuous basis, since 2004, I believe. And,  
5           since that time, we do monitor all the  
6           structures on site on a daily basis. I won't  
7           say we maintain them all on a daily basis,  
8           because they may not need any maintenance.

9       MR. MCDONNELL:           Are you aware when a  
10          diversion ditch has started to overtop and flow  
11          into the tailings pond?

12      MR. POLYCK:                Yes.

13      MR. MCDONNELL:           And are you aware when that  
14          started, and over what duration that occurred?

15      MR. POLYCK:                Yes.

16      MR. MCDONNELL:           And when?

17      MR. POLYCK:                I'm not sure of the exact  
18          dates, but during the winter it's extremely hard  
19          to see under the snow, when the snow is six feet  
20          deep. In the springtime, when that event  
21          occurred, and I was at the site at that time, it  
22          was early in the spring, with spring runoff, and  
23          it wasn't a very pleasant situation at the time.  
24          However, we did address the problem as soon as  
25          it was brought to our attention.

26      MR. MCDONNELL:           So, what years was that

1 occurring?

2 MR. POLYCK: The only one I know is when  
3 we were there in 2005.

4 MR. MCDONNELL: So this was occurring during  
5 the period of time when KRH was responsible for  
6 the site, then?

7 MR. POLYCK: I believe the Chair asked me  
8 to not refer to my past life, and that was part  
9 of my past life.

10 MR. WILLIS: Well, we've got to be  
11 consistent. There was an objection about his  
12 role as a Water Resource person.

13 MS HENDERSON: For clarification, Mr. Chair,  
14 I don't believe Mr. McDonnell is asking about  
15 any of Mr. Polyck's past life. He's asking --  
16 if I can assist him, he's asking the applicant  
17 when the applicant was on site and became aware  
18 that the diversion ditches were overflowing;  
19 what year that occurred.

20 MR. WILLIS: Then, I'd like to have  
21 somebody, other than Mr. Polyck, when he wasn't  
22 working for the applicant, to respond, if they  
23 can.

24 MS HENDERSON: That's certainly fine for us.  
25 We didn't ask Mr. Polyck to answer the question;  
26 we're asking the applicant the question.

1 MR. WILLIS: Yes, my understanding is, all  
2 questions are directed to the applicant, not  
3 specifically to Mr. Polyck. It's the most  
4 appropriate person from the applicant who should  
5 be responding. And, if the company can't  
6 answer that question, we're left with it.

7 MR. POLYCK: Would you repeat the  
8 question, please.

9 MR. MCDONNELL: Is the applicant aware, and  
10 what year, when the diversion ditches started to  
11 overflow?

12 MR. POLYCK: When the ditch started to  
13 overflow, I wasn't on site, and the person that  
14 was, the Site Manager, Mr. Terry Eisenman, had  
15 to leave the country on a project last night.  
16 So I don't know the exact date when it did  
17 happen.

18 MR. MCDONNELL: Would you agree that it could  
19 have happened as early as 1999/2000?

20 MR. POLYCK: As I said before, the company  
21 wasn't on site on a regular basis in 1999.

22 MR. WILLIS: I mean, this is evidence  
23 that, if the Government had it -- I mean, you're  
24 not getting a lot of response because the people  
25 aren't here. If that's part of your case as  
26 being relevant, then it's something that ought

1 to have been produced before.

2 MS HENDERSON: Mr. Chair, if I may, it is  
3 our view that the applicant has raised a new  
4 issue in the response that they gave, about them  
5 monitoring this site daily. It was not in their  
6 previous submissions. Had it been, we would  
7 have tabled, and filed as an exhibit, a letter  
8 indicating that they were not monitoring on a  
9 daily basis. And that's the point that I think  
10 we're trying to probe here.

11 MR. WILLIS: All right, fine.

12 MS HENDERSON: And, yes, we do have such a  
13 -- we can provide some indication of that, if  
14 you would like, but I understand we're not at  
15 the point where new exhibits are generally  
16 filed.

17 MR. WILLIS: That's right. So, keep  
18 asking the questions, and see if there's  
19 anything further they can add.

20 MR. DICKSON: We were on site permanently  
21 from May of 2005 onwards. Prior to that, we were  
22 not on site, and there was a period, between  
23 1999 and 2005, when we had no one continuously  
24 on site. During that time, there were several  
25 instances that there was water flowing into the  
26 tailings dam we were made aware of and, twice

1           during that period, we did hire contractors to  
2           go and clear out the ditches.

3           MR. MCDONNELL:           The company appears to be  
4           asking the Board to go on faith that the  
5           applicant will continue to monitor and maintain  
6           the water management structures, absent a  
7           licence condition to that effect. Can you  
8           explain that, considering past experience, why  
9           a licence condition, regarding monitoring and  
10          maintenance of the structures, should not be in  
11          place?

12          MR. DICKSON:           I think we've already agreed  
13          that there should be some monitoring.

14          MR. MCDONNELL:          Thank you. Now I'd like to  
15          continue on with the decommissioning plans. I'd  
16          like to ask a question, when this was being  
17          tabled, in regards to a comment at the end of  
18          the day, yesterday, where the applicant  
19          indicated they had agreed with Yukon's  
20          recommendation to submit a detailed abandonment  
21          plan. I wanted to confirm if that was correct.

22          MR. POLYCK:           Yes, we have agreed to submit  
23          a decommissioning plan. The company's position,  
24          as far as the care and maintenance program is  
25          concerned, we believe that the decommissioning  
26          plan is a bit premature. As things go along,

1           the whole situation is dynamic. And we have  
2           agreed to submit a decommissioning plan with our  
3           application for a production licence. We're  
4           certainly not planning on abandoning the site.

5           MR. MCDONNELL:           I'll leave the content of the  
6           plan to the Board's discretion. I'd like to ask  
7           about the timing. Yukon's submission refers to  
8           the plan being submitted within a year and a  
9           half. Earlier in the hearing yesterday, Mr.  
10          Polyck indicated it could be prepared in one  
11          year.

12                                    The Yukon supports this, and  
13          would like to confirm that this is, indeed, what  
14          you intend to do.

15          MR. POLYCK:            We could have a plan together  
16          in a year, but we would like to have the extra  
17          six months to insure that we're covering all  
18          grounds.

19                                    We would also like to discuss  
20          our decommissioning plan with the Yukon  
21          Government before we take it to the Board, so  
22          that the Yukon Government at least knows what  
23          we're doing.

24          MR. MCDONNELL:        Thank you. In regards to the  
25          discussions, I'm assuming that would be in  
26          relation to studies and things you'll be doing

1 in the development of the plan. Along that  
2 line, would you have any objection to submitting  
3 a study plan to government agencies, for review  
4 and approval, within one month of licence  
5 issuance; and to then be required to implement  
6 that approved study plan?

7 MR. POLYCK: We will agree to whatever the  
8 Board considers appropriate.

9 MR. MCDONNELL: Now I'd like to move on to  
10 some questions regarding security, which is  
11 section 3.4.2 in Exhibit 6.1. This is also in  
12 regards to a statement made with the tabling of  
13 this response.

14 Can you confirm my  
15 understanding of KRH's commitment, made at the  
16 end of the hearing yesterday, that KRH is  
17 willing to provide security in accordance with  
18 a condition of this water licence?

19 MR. POLYCK: As I said, we will do  
20 whatever the Board considers appropriate.

21 MR. MCDONNELL: Can you clarify if it is  
22 still the applicant's intention to furnish the  
23 amount of security, fixed by the Board, by  
24 December 31<sup>st</sup>, 2007, unless the applicant has  
25 submitted an application for a Type A water  
26 licence; and in that case, the applicant does

1 not propose to submit any security under this  
2 licence?

3 MR. DICKSON: Yes, the company does agree  
4 to furnish security to the Board by December  
5 31<sup>st</sup>, 2007, unless we have previously submitted  
6 a licence for production, in which case we would  
7 hope that that licence would have its own  
8 security.

9 MR. MCDONNELL: Assuming that the applicant  
10 submits an application for a Type A Quartz  
11 Mining Licence on December 30<sup>th</sup>, 2007, how long  
12 do you think it would take to go through the  
13 adequacy review, environmental assessment  
14 process and water licensing process, and thus be  
15 in a position to post security?

16 MR. DICKSON: I think you might be in a  
17 better position to know that time, than me.

18 MR. MCDONNELL: When did you submit your  
19 water licence application, the one before us  
20 now; can you tell me how many years ago that  
21 was?

22 MR. DICKSON: That was two and a half years  
23 ago.

24 MR. MCDONNELL: In light of this, would you  
25 agree that it would be reasonable to expect that  
26 it may take at least a couple of years to

1            proceed through an environmental assessment and  
2            licensing process; and thus, based upon your  
3            proposal, the site will continue to be unsecured  
4            for this time period, at least, even though  
5            liabilities will continue to exist?

6            MR. DICKSON:                    Yes, I would agree that it  
7            would take at least a couple of years.

8            MR. MCDONNELL:                    Have you confirmed that you  
9            would be using the existing tailings pond if you  
10           went into production?

11           MR. DICKSON:                    I don't believe we'll be  
12           using the existing tailings pond, when we go  
13           into production, for tailings.

14           MR. MCDONNELL:                    And if you don't, how would  
15           you propose to secure the costs for the  
16           abandonment of the tailings pond, if you don't  
17           include it as part of your mine production  
18           application?

19           MR. DICKSON:                    I didn't say it wouldn't be  
20           part of our mine production application, I said  
21           we wouldn't be using it for tailings.

22           MR. MCDONNELL:                    So, am I correct in assuming,  
23           then, that it would be part of your application;  
24           or is there still a question?

25           MR. DICKSON:                    It's very likely to be used  
26           as a source of water for the process, but it

1           won't be used for tailings.

2           MR. MCDONNELL:           In your response on security,  
3           the second paragraph, you've indicated that  
4           you'll be relocating the tailings to a different  
5           location than what Yukon's calculation was based  
6           upon; and that this is based upon a bathometric  
7           survey. Is this the only investigation and  
8           analysis that will be done to support the  
9           proposed method of abandonment of the tailings  
10          pond?

11          MR. WILSON:           No, that was for the purpose  
12          of determining where tailings would be most  
13          logically placed. The original calculations  
14          were based on moving tailings to the north side.  
15          Based on the current bathometric maps, the north  
16          side is the deepest channel, and it doesn't make  
17          sense to place them there. The south side of  
18          the tailings pond has much better terrain for  
19          placing tailings.

20          MR. MCDONNELL:        Would there not also be other  
21          studies or investigations that you would  
22          consider doing before finalizing your disposal  
23          options for the tailings, and abandonment of the  
24          tailings?

25          MR. POLYCK:           Yes.

26          MR. MCDONNELL:        Would it be reasonable to

1 expect that these additional studies and  
2 investigations might result in other options,  
3 and thus it is, at this time, very uncertain  
4 what the best abandonment option is?

5 MR. POLYCK: Yes, life's like that.

6 MR. MCDONNELL: So, based upon this  
7 uncertainty, would it not be prudent to use a  
8 more conservative cost estimate, such as what  
9 Yukon has recommended, until more information is  
10 known, to support a less conservative estimate,  
11 is provided?

12 MR. WILSON: I don't think it's more  
13 conservative to consider filling the deep end of  
14 the pool. We selected an option that is  
15 conservative, but based on more recent knowledge  
16 than appears to have been used in your cost  
17 estimates.

18 MR. WILLIS: Mr. McDonnell, just if you  
19 could slow down a bit; you are starting to speed  
20 up.

21 MR. MCDONNELL: My apologies; I'll try to  
22 slow down.

23 This is also in regards to a  
24 statement with the tabling of this document  
25 yesterday, where they indicated they'd had a  
26 contractor provide some quotes for work. And I

1           would request a recap of what these quotes were  
2           provided for.

3       MR. PETTERSSON:           We have two quotes for line  
4           item number 3, Appendix 1, Exhibit 6.1. The  
5           column D refers to a contractor estimate of  
6           \$30,000, which was provided to the Camp Manager,  
7           Terry Eisenman. This regards to a hydraulic  
8           bulkhead for the 1430 portal.

9                           Do you want me to -- I can  
10          provide the details of the quote, if you want.  
11          I don't know how much detail to provide.

12       MR. MCDONNELL:           I       don't understand...  
13           providing written details, or what would you be  
14           providing?

15       MR. PETTERSSON:           I have a quote here, I don't  
16           have copies that I can submit. I can read it,  
17           if you want, into the record.

18       MR. MCDONNELL:           I suppose my question is, it  
19           would have been nice to see them, but on what  
20           did the contractor base these quotes? Had they  
21           been to the site, for example?

22       MR. PETTERSSON:           I can't answer that question.  
23           This was provided to me by Terry Eisenman, who  
24           had been in contact with the contractor. But it  
25           was for this specific site and the specific  
26           portal.

1 MR. MCDONNELL: Mr. Chairperson, I'm now  
2 turning my attention to the review of the  
3 security cost estimates. A substantial amount  
4 of new information was provided at the end of  
5 the day, yesterday, in these tables, which has  
6 resulted in a number of questions that we have.  
7 MR. WILLIS: Then this is your chance to  
8 ask the questions.  
9 MR. MCDONNELL: I shall proceed... slowly.  
10 MR. WILLIS: Thank you.  
11 MR. MCDONNELL: I refer to line item 3, 1430  
12 portal. My question is in regards to, does the  
13 applicant not find it necessary to reinstall the  
14 pipeline, from the portal level down to the  
15 tailings pond, almost annually, due to the  
16 damage it incurs each winter?  
17 MR. PETTERSSON: That was my understanding,  
18 that it was part of your consultant's cost  
19 estimate for the care and maintenance. And, as  
20 we have stated in this response to intervention,  
21 the company's opinion is that the care and  
22 maintenance should not be -- security should not  
23 be considered for the care and maintenance when  
24 it's not supported in the water site -- the  
25 regulations.  
26 MR. WILLIS: Sorry, in the regulations.

1 MR. PETTERSSON: The regulations. Thank you.

2 MR. MCDONNELL: Would it not be prudent,  
3 then, to continue to replace this pipeline, or  
4 instal an improved system, that does not require  
5 regular replacement, as part of an abandonment?

6 MR. PETTERSSON: I don't understand how you go  
7 from the care and maintenance portion, into the  
8 cost for permanent closure.

9 MR. MCDONNELL: The issue is that, this is  
10 part of abandonment; this is an activity that  
11 has to be done as part of an abandonment. So my  
12 question is, would it not be prudent to either  
13 replace this pipeline, or intal it, as part of  
14 your abandonment activity; and, thus, the  
15 costing should remain as a cost to abandon the  
16 property, as part of the cost?

17 MR. POLYCK: This is a detail that needs  
18 to be worked out while we prepare our  
19 decommissioning plan. And, as I said earlier,  
20 we're not really planning on decommissioning  
21 right now.

22 However, should the Board  
23 decide that they require a decommissioning plan  
24 for the care and maintenance program, we will  
25 certainly comply.

26 MR. MCDONNELL: I'd like to move on to the

1           \$10,000 item for piping at the portal. My  
2           question in regards to that, it's still in the  
3           same line item, does the applicant agree that  
4           the portal will likely continue to make water  
5           after abandonment?

6           MR. POLYCK:                               Not if it's sealed.

7           MR. MCDONNELL:                            Does the applicant agree that  
8           all reasonable efforts should be undertaken to  
9           insure good water quality of the portal  
10          discharge after abandonment?

11          MR. POLYCK:                            Yes.

12          MR. MCDONNELL:                        Would the applicant agree  
13          that various steel, water and air pipes, copper  
14          piping and etc., should be considered possible  
15          sources of contaminant loading into the portal  
16          discharge after abandonment?

17          MR. POLYCK:                            Possibly.

18          MR. MCDONNELL:                        You've mentioned about  
19          installing a plug in the portal, to prevent  
20          water flow. My question is, how would you  
21          instal a plug when it is partially obstructed by  
22          items such as those mentioned above, without  
23          removing them?

24          MR. DICKSON:                            You're asking for a --  
25          really, you're asking for details of an  
26          abandonment plan which we don't have in place.

1 All we've done here is respond to the line items  
2 by your consultant, to try and show that these  
3 numbers were way too high. We're not trying to  
4 put this forward as an abandonment plan by us;  
5 merely as a response to the numbers that your  
6 consultant put out. We will, in due course,  
7 have our own abandonment plan, which we will  
8 cost.

9 This is our response to you,  
10 it's not new evidence from us.

11 MR. MCDONNELL: So, does that mean that these  
12 numbers were quickly thrown together in  
13 response, and they can't be justified?

14 MR. PETTERSSON: The quote we have does  
15 include removing of debris, cleaning and drying,  
16 etc., so it is included in the cost estimate and  
17 the price quote we have received. So, if the  
18 other \$10,000 were also included, you would do  
19 it twice.

20 MR. MCDONNELL: Like to ask a question about  
21 the hundred thousand dollars, to the \$60,000,  
22 change, for the cost of the plug. Was a copy of  
23 the cost estimate from the contractor listed in  
24 the table provided to the Board or to ourselves?

25 MR. PETTERSSON: No, it was not.

26 MR. MCDONNELL: Was a design or work plan for

1 a permanent portal plug provided by a  
2 professional engineer, as is done in a number of  
3 other jurisdictions?

4 MR. PETERSSON: No, it was not. This was not  
5 prepared for a detailed cost estimate by KRH,  
6 this was part of KRH review of Yukon  
7 Government's cost estimate, and provided as  
8 review material.

9 MS HENDERSON: Mr. Chair, if I may, if we  
10 could just have a couple of minutes here, just  
11 to confer, based upon the answers that we're  
12 getting here, as to what our next area of  
13 questions should be... if we could just for a  
14 few minutes.

15 MR. WILLIS: How much time do you need,  
16 realistically? I tell you what, why don't we  
17 take a 10-minute break, and we can resume back  
18 here in 10 minutes.

19 MS HENDERSON: Thank you.

20 (Proceedings adjourned)

21 (Proceedings reconvened)

22 MR. WILLIS: Prior to starting here,  
23 because there's two Board members out so this is  
24 not -- we've got the rest of the day, but I just  
25 want to make it clear that anything in front of  
26 us should be relevant to the ultimate licensing

1 decision, so... if that will make a difference  
2 to how this will proceed.

3 So, Government of Yukon.

4 MR. MCDONNELL: Thank you, Mr. Chairperson.

5 In light of the responses I've been getting, I'd  
6 like to forego continuing with the line-by-line  
7 review of the cost estimates they've provided.

8 Instead, given that there's  
9 no abandonment or decommissioning plan prepared  
10 for the site, the applicant really has no idea  
11 what the total aggregate cost might be to  
12 abandon the undertaking, restore the site, and  
13 undertake any required associated monitoring;  
14 would you agree with this?

15 MR. POLYCK: We agree partially, but we  
16 believe the Government's in the same position.

17 MR. MCDONNELL: My question is, can  
18 abandonment of a site occur overnight, once a  
19 decision to close has been made?

20 MR. POLYCK: I think that's quite obvious.

21 MR. MCDONNELL: Can I have an answer to the  
22 question, please?

23 MR. POLYCK: No.

24 MR. MCDONNELL: So, while you're in the  
25 process of abandoning, is there not a cost to  
26 maintain facilities and structures, such as

1           constructing and operating a water treatment  
2           plant, that should be included as a cost to  
3           abandon and restore the site?

4           MR. POLYCK:                   It's cost of maintenance,  
5           regardless. We're planning on putting a water  
6           treatment plant in this summer, and we  
7           anticipate having this plant, or another plant,  
8           in place for abandonment.

9           MR. MCDONNELL:               Yukon Government has no  
10          further questions.

11          MR. WILLIS:                 Thank you. Environment  
12          Canada.

13          **ENVIRONMENT CANADA QUESTIONS KETZA RIVER HOLDINGS**

14          MR. SOPROVICH:             I had a little bit of  
15          difficulty, last night, trying to determine  
16          where to go. I started to write a lot of  
17          questions, and then I realized that many of the  
18          issues that are really presented in here, by the  
19          applicant as questions to EC, have already been  
20          addressed in terms of rebuttal, this type of  
21          thing. So I came in kind of thinking that maybe  
22          I would make it really, really short, but, of  
23          course, Yukon Government came with a whole mess,  
24          and I'm wondering what I should be doing -- a  
25          mess of questions, I mean, of -- a large number  
26          of questions. My apologies, I don't mean to

1 suggest that it's a mess.

2 MR. WILLIS: Well, can I walk you through  
3 this process. You're limited to the response of  
4 the applicant and, personally speaking, I think  
5 some of them are simply their submissions in the  
6 guise -- they'll probably be doing again, at the  
7 end. But, if you've got questions you feel that  
8 need answered, this is your chance to ask those  
9 questions. But, hopefully they're relevant to  
10 the issue in front of you.

11 MR. SOPROVICH: Yes, I will try to make sure  
12 that that is the case.

13 Firstly, in terms of the  
14 response to recommendation number 2, Ketz River  
15 Holdings does not agree with our position, in  
16 the second point there. The position that you  
17 don't agree to is: "Keeping the tailings pond  
18 water level high would have a negative impact on  
19 the company's options in conducting its care and  
20 maintenance activities by increasing costs from  
21 pumping back seepage flows."

22 My question to the company  
23 is, what would those costs be?

24 MR. POLYCK: We don't know. We haven't  
25 started pumping.

26 MR. SOPROVICH: My second question, in

1 relation to that, is, do you feel that cost,  
2 particularly an unknown cost, is reasonable  
3 justification for protection of the environment  
4 downstream?

5 MR. POLYCK: The company is committed to  
6 environmental protection of the downstream of  
7 the mine.

8 MR. SOPROVICH: I'm going to move on to  
9 recommendation 4 in the company's response. You  
10 are suggesting that you can agree to .02  
11 milligrams per litre, for KR-8, as a monthly  
12 average, or as a water quality objective.  
13 What's the company's understanding of the levels  
14 that are set within the context of a water  
15 quality objective?

16 MR. WILSON: I'm sorry, could you repeat  
17 that question again, please?

18 MR. SOPROVICH: You have suggested, in your  
19 response, that you can agree to .02 milligrams  
20 per litre, at KR-8, as a monthly average, or as  
21 a water quality objective. How do those two  
22 relate, in terms of what is required for a water  
23 quality objective?

24 MR. WILSON: The reason that we've used  
25 those terms, is that we know there are periodic  
26 spikes, in arsenic concentrations, that are

1           beyond control. In other words, they come from  
2           above the tailings pond, so we have no ability  
3           to influence them. And why we've used these  
4           terms is that, if we ever did get into a  
5           position that we required releasing water from  
6           the tailings pond, we would be able to either  
7           stop that release, or change the volume of  
8           release, to try and maintain an objective or a  
9           target of .02.

10                           But the only thing we have  
11           control over is the release from the tailings  
12           pond, and that's why we had used these terms.

13                           Ultimately, the same applies  
14           downstream, at KR-12. We don't control all  
15           inputs into that station, but we do know that  
16           the ones that we do control, such as pumped  
17           release from the tailings pond, we can control  
18           volume such that we, using our model, would not  
19           predict an exceedance of the number that we've  
20           suggested here.

21   MR. SOPROVICH:           In       terms       of your  
22           understanding of CCME water quality objectives,  
23           does that allow for exceedances of the value  
24           that's set?

25   MR. WILSON:           My   interpretation   of an  
26           objective is something that is not enforceable

1           and, therefore, yes, you would assume that,  
2           periodically, there may be exceedances.

3           MR. WILLIS:                   Can I stop you there? A  
4           water use licence will have to have standards  
5           that can be enforced. So I don't know where  
6           we're going on this thing, because I cannot  
7           contemplate getting into a vague objective. I  
8           think a water use licence has to, at the end of  
9           the day, be clear, to have a court interpret it  
10          for the purposes of enforcement.

11                                        So I don't know how far you  
12          two want to go on this thing, but --

13          MR. SOPROVICH:               Fair enough, Mr. Chairman, I,  
14          too, want to leave today. I was just trying to  
15          get a clarification in terms of this aspect of  
16          an average in exceedance, versus what an  
17          objective is.

18                                        But I will go on further, to  
19          point 3 in that paragraph, which says that KRH  
20          can agree to utilizing KR-16 as a water quality  
21          station upstream of mining disturbance. And we  
22          heard the other day, I believe from Mr. Polyck,  
23          that there's really not much disturbance  
24          upstream.

25                                        But I Google Mapped, Google  
26          Earthed the site, last night, and I have a hard

1 time with that.

2 Is the company willing to  
3 revisit this, particularly in the light that you  
4 might be applying for another water licence, in  
5 which case you would want a good background  
6 station for that licence -- or, application,  
7 rather.

8 MR. POLYCK: Yes. It's very difficult to  
9 find water upstream of KR-16, and we believe  
10 that site is appropriate, but we will certainly  
11 revisit it. We haven't had the opportunity to  
12 Google the site.

13 MR. SOPROVICH: Are there not other stations  
14 reporting to Cache Creek which may provide  
15 sufficient flow?

16 MR. WILSON: You're referring to upstream  
17 of KR-16?

18 MR. SOPROVICH: Either upstream of KR-16, or  
19 another stem of Cache Creek.

20 MR. WILSON: Not that we found reliable at  
21 this point. We have other stations upstream of  
22 KR-16; they're not reliable.

23 In other words, I should  
24 clarify that, we can't always safely get to  
25 them, and we don't always have water flowing at  
26 those stations throughout the year. We

1 sometimes end up that the water dries up in some  
2 portions of those streams.

3 MR. SOPROVICH: What would be the main  
4 contributors of water to Cache Creek, in terms  
5 of which parts of the valley upgradient of the  
6 mine mill area?

7 MR. WILSON: I'm not quite sure how this  
8 relates to our response, but we do have studies  
9 going on, right now, to try and determine just  
10 that. I don't know that I'm familiar enough, or  
11 that those reports have been finalized, and so  
12 I'm sorry I can't succinctly answer your  
13 question. We know it's a combination of surface  
14 water and groundwater inputs, and seasonally  
15 they change.

16 In summer, obviously, we get  
17 more surface water inputs -- spring and summer,  
18 and throughout the winter it's more groundwater  
19 inputs. That's about the detail I can provide  
20 at this point.

21 MR. SOPROVICH: In that section, also,  
22 recommendation 4, you are suggesting that you  
23 can meet or agree to .02 milligram per litre at  
24 KR-8; yet, on page 9 of this response, or  
25 questions to -- you are listing the objective as  
26 .05. What is the actual number, please?

1 MR. WILSON: KR-9 is a number that we had  
2 suggested in our application, and what we're  
3 trying to show is that we are willing to try and  
4 accommodate the requests of the intervenors, by  
5 considering a lower standard.

6 MR. SOPROVICH: I'm sorry, on that final  
7 page, you say: "KRH proposes the following Water  
8 Quality Compliance Criteria for Arsenic". And  
9 in that table on page 9, you have KR-8  
10 objectives listed as .05 milligram per litre.  
11 Yet, on page 3, in recommendation, and your  
12 response, you say you're willing to go to .02  
13 milligrams per litre for arsenic. Which of  
14 those two numbers is being proposed here?

15 MR. WILSON: We're proposing .05, as per  
16 the table on page 9.

17 MR. SOPROVICH: So, on page 3, where you say  
18 you can agree to .02, you're now saying you  
19 cannot agree to .02?

20 MR. WILSON: No. That is not what we're  
21 saying. We're saying that we're proposing that  
22 this is the standard that we feel that can be  
23 met on an ongoing basis, regardless of whether  
24 we're discharging or not. It's a number that we  
25 can meet under all circumstances.

26 MR. WILLIS: Just which number?

1 MR. WILSON: The number that we've  
2 proposed in the table on page 9, which would be  
3 0.05 milligrams per litre total arsenic.

4 MR. WILLIS: And, so, are you changing  
5 page 3 to comply with your table; or is one a  
6 standard, the other one an objective? I see  
7 where Mr. Soprovich is going on this.

8 MR. DICKSON: I think that, on page 3, what  
9 we're suggesting is .02 as a monthly average  
10 water quality objective; and on page 9, that is  
11 a, sort of, sampler that we're intending to  
12 meet.

13 MR. WILLIS: I'm sorry, I'm still not  
14 following that.

15 MR. DICKSON: Page 9 samples, of .05, is  
16 what we will try to meet as an objective. On  
17 page 3, we're suggesting a monthly average of  
18 .02 is what we would expect to meet.

19 MR. WILLIS: But is that a standard? I  
20 mean, help us out on this one.

21 MR. DICKSON: No, it's an objective.

22 MR. WILLIS: I mean, I'm now getting more  
23 confused.

24 MR. DICKSON: It's an objective.

25 MR. WILLIS: But we don't put objectives  
26 in -- I don't anticipate a Board putting an

1 objective in; you're going to try to work with  
2 standards or limits.

3 MR. POLYCK: Mr. Chairman, we'll try and  
4 work with the Government on this issue.

5 MR. WILLIS: No, no, we have to -- look,  
6 everybody, please help us out on this thing.  
7 We're going to have to -- if we determine we're  
8 going to issue a licence, we have to have a  
9 licence that can be enforceable; and, therefore,  
10 there will be limits or standards, but not a  
11 vague objective.

12 What you've provided to us is  
13 confusing, and so I just need clarification.

14 MR. WILSON: What we've tried to say is  
15 that there are three discharge points, which we  
16 can control, and which we would anticipate  
17 standards would be set for. We realize that the  
18 regulators want to see certain water quality  
19 downstream, and we will certainly try and set  
20 our standards, and control water releases from  
21 the tailings pond, to the best of our ability,  
22 so that we achieve those. But they're really  
23 not standards that we have 100% influence over;  
24 therefore, we have used the terms "objectives",  
25 as something we would like to try and achieve.

26 But, in terms of what the

1 Board can set, we have proposed three distinct  
2 points, and we have proposed one distinct  
3 standard for those three points.

4 MR. WILLIS: So, at page 3, 0.02 is the  
5 standard you're looking for?

6 MR. WILSON: No, the information on page 3  
7 is what would be nice to have; but it's not a  
8 standard. The standard that we're suggesting is  
9 .5 for the releases from the tailings pond, and  
10 that's where we have control. We don't have  
11 control at KR-8.

12 MR. WILLIS: No, I appreciate that. But I  
13 don't believe that this Board will be issuing a  
14 loosey-goosey licence; it's going to have some  
15 clearly enforceable standards.

16 So, I can see the difficulty  
17 and, if that's your best answer, that's your  
18 best answer.

19 MR. PETERSSON: Mr. Chair, can I clarify this  
20 point, or ask a question? If you're saying that  
21 the Board will not include objectives in the  
22 licence, and the whole discussion about  
23 recommendation 4 is about objectives, do we even  
24 need to discuss it?

25 MR. WILLIS: We need a clear number that,  
26 if you exceed it, you can be charged under the

1           *Waters Act.*

2       MR. POLYCK:                   This is a response to  
3           recommendation 4 on behalf of Environment  
4           Canada, I don't know whether it's relevant or  
5           not for the Board's purposes.

6       MR. WILLIS:                   I think that you've already  
7           provided us with your evidence, and I think  
8           trying to meet what they talked about, an  
9           objective, as I indicated before... I think we  
10          can move on and forget about objectives, and  
11          focus in on -- so I think that's a red herring  
12          and irrelevant for the purposes of this hearing.

13       MR. SOPROVICH:               In your response to our  
14          recommendation number 2, you give various  
15          suggestions, here, in terms of how you feel that  
16          there isn't a risk of arsenic reporting from  
17          tailings into water. Has the company done any  
18          geochemical test work on the tailings material?

19       MR. WILSON:                   That work is currently  
20          underway.

21       MR. SOPROVICH:               Can you give us any  
22          indication of what the results of that testing  
23          is?

24       MR. WILSON:                   To the best of my  
25          recollection, we do not have any preliminary, or  
26          otherwise, lab reports at this time.

1 MR. SOPROVICH: The important part of this  
2 whole question is the movement of contaminants  
3 through the system. Can you describe, please,  
4 what the flux is, of contaminants from tailings  
5 up into the tailings pond water?

6 MR. WILLIS: Sorry, where do you see that  
7 in their response, so that I'm focusing in on --  
8 which part of their response prompts that  
9 question?

10 MR. SOPROVICH: It has to do with the  
11 suggestion by the applicant that, despite  
12 lowering the tailings pond, they haven't seen  
13 any difference in water quality in that tailings  
14 pond. So it is exploring the various mechanisms  
15 of release of arsenic, from tailings, into  
16 water. If this starts to dig us into a big hole  
17 that takes us to tomorrow, then I really don't  
18 want to go there. I could leave this for Mr.  
19 Lorimer, in terms of describing how contaminants  
20 move through systems, through tailings and into  
21 groundwater, and into -- in and out of various  
22 media, and trust that it will all be dealt with  
23 that way.

24 MR. WILLIS: Well, I just want to make it  
25 clear that -- are you asking to have, as a term  
26 of a licence, a particular clause, in response

1 to what they've -- I just don't want to go too  
2 far away from questions in respect to the  
3 response.

4 So, is there a suggestion  
5 that this will be of assistance to us, in  
6 issuing the licence, as far as a term?

7 MR. SOPROVICH: I don't know if I can answer  
8 that at this point, and perhaps I'll just leave  
9 it to Mr. Lorimer to separate the chaff from the  
10 wheat on this particular question and line of  
11 reasoning.

12 MR. WILLIS: Okay, thank you.

13 MR. SOPROVICH: In recommendation number 5,  
14 your company's response is that you agree to  
15 using the MMER levels as discharge standards.  
16 And I see that this was all -- a question to  
17 this respect was given by Yukon Government,  
18 earlier, but I'd like to underline that this  
19 question is -- does the company see this as a  
20 mine?

21 MR. POLYCK: Mr. Chairman, that's beyond  
22 the scope of this application, I believe.

23 MR. WILLIS: I think what you have is the  
24 record shows what they've applied for, and we're  
25 aware that there's no application for mining.  
26 But I think the question you're asking is, the

1 existing location at the site, is it a mine or  
2 not? And I don't know where that's taking us  
3 to, but you can perhaps answer that question.

4 MR. SOPROVICH: I'm just trying to establish  
5 the relevance of the MMER in terms of this  
6 particular application.

7 MR. WILLIS: I think we have that  
8 evidence; that they have given the evidence that  
9 that is for a functioning mine; however, they  
10 are suggesting that that's an appropriate  
11 standard. And the argument I've heard from the  
12 intervenors, they want a higher standard. And  
13 that's ultimately for the Board to determine.

14 MR. SOPROVICH: Okay, thank you. One last  
15 question in this section. There's a statement,  
16 here, that an MMER limit of .5 milligram per  
17 litre has been used since 2005, and the  
18 regulatory agencies have not expressed any  
19 concerns. Which mines has this been used at in  
20 the Yukon; and which agencies have not expressed  
21 any concerns?

22 MR. WILSON: This is from this site, and  
23 this is from meetings that were held prior to  
24 discharge of the water from the tailings pond,  
25 where we presented a proposed number of .05, and  
26 fish bioassay evidence to show that no lethal

1 effects and no stress at 100% tailings water.  
2 And it was then agreed, by -- Environment Canada  
3 was at the table, I believe that would have been  
4 Steve Aurelle (phonetic), and Water Resources  
5 was at the table as well, and we agreed that  
6 that would be a reasonable way to lower water in  
7 the tailings pond, given the evidence we had on  
8 tailings pond water quality.

9 MR. SOPROVICH: I have a different  
10 recollection of that particular concern, but I  
11 guess we have to leave it at that. That is the  
12 end of my questions, thank you.

13 MR. WILLIS: Thank you. Ross River Dena  
14 Council.

15 **ROSS RIVER DENA COUNCIL QUESTIONS KETZA RIVER**  
16 **HOLDINGS**

17 MR. TOBLER: On the security cost  
18 estimate, item number 12, Cache Creek diversion,  
19 narrowing of channel, \$30,000... does this  
20 include engineering design?

21 MR. POLYCK: I'm sorry, where are you  
22 referring?

23 MR. TOBLER: Item number 12 on the  
24 security cost estimate sheet. Cache Creek  
25 diversion and narrowing of the channel, \$30,000.

26

1 MR. WILSON: We sought advice. One of the  
2 people we did talk to, although we don't have  
3 anything in writing from them, was an engineer  
4 licensed to practise in the Yukon, who was  
5 familiar with this site. We talked to them, and  
6 then we also obtained a quote from a local  
7 contractor, based on the information that we had  
8 been provided. I wouldn't call it final design,  
9 but I would call it a preliminary cost estimate.

10 This is a very small area  
11 that we're talking about here. So, based on  
12 that, these were the prices that were given.

13 MR. TOBLER: And I'm assuming, or I'm  
14 asking, is it your opinion that you wouldn't  
15 need a water licence for this specific work?

16 MR. WILSON: As far as I recall -- give me  
17 a minute, I'm just going to re-read this to make  
18 sure I'm recalling correctly.

19 MR. POLYCK: The area in question is very  
20 small, and it consists of fairly large rock and  
21 a slump on the sidehill. We don't anticipate  
22 obtaining a licence to do any remedial work in  
23 this site, because we won't be working in the  
24 watercourse. Other than perhaps manoeuvring two  
25 or three boulders around, that would be less  
26 than -- certainly less than a hundred cubic

1 metres of material.

2 MR. TOBLER: Okay, thank you, that's it.

3 MR. WILLIS: You mean you've concluded  
4 your questions?

5 MR. TOBLER: That's correct, yeah.

6 MR. WILLIS: Okay, Board members? Anne  
7 Leckie.

8 **THE WATER BOARD QUESTIONS KETZA RIVER HOLDINGS**

9 MS LECKIE: It's a very minor point, but  
10 I think caused some confusion for me. 3.3.2, on  
11 page 5: "KRH Response: Compliance with the  
12 standards for lead, nickel and zinc from the old  
13 licence has not been an issue... and these  
14 standards are acceptable to KRH."

15 However, on page 8, there is  
16 a table: "KRH proposes the following compliance  
17 criteria for these discharge points [for]...",  
18 lead, nickel and zinc.

19 The .2, .5 and .5 are  
20 different from what was in Exhibit 8.1.1, as the  
21 Government recommended, which was .1, .3 and .3.  
22 And I'm wondering if there's just a typo there  
23 on the chart, or if those are different numbers,  
24 or did I miss something completely?

25 MR. WILSON: We missed changing this table  
26 when we updated it on our slides. My apologies.

1 Yes, the information that we had provided on the  
2 slides is the correct information; on the  
3 updated slides in the Exhibit 8.1.1. Thank you.

4 MS LECKIE: So, then, the total nickel  
5 would be .1 -- I'm sorry, total lead would be  
6 .1, total nickel would be .3, and total zinc  
7 would be .3, on that chart; which is what it is  
8 in 8.1.1.

9 MR. WILLIS: Just for the record, subject  
10 to check. Whatever 8.1... that will govern.

11 MS LECKIE: Okay, that was my only  
12 question, then, if we could just make sure that  
13 everything matches, that would be great.

14 MR. WILLIS: Anything further?

15 MS LECKIE: That's it.

16 MR. WILLIS: Ron Johnson.

17 MR. RON JOHNSON: I have some questions on the  
18 Exhibit 6.1, the Review of Security Cost  
19 Estimates, here. You've indicated that what you  
20 term the care and maintenance is, to you, a  
21 separate category. But what I'd like to do is  
22 go through the list here, line by line, and  
23 inquire as to what it is you have actually done  
24 on these particular items, and what your plans  
25 are for perhaps this next season, and what you  
26 think you might ultimately spend on these items.

1 I'm not asking for you to  
2 nail it down tight, but just give me your best  
3 estimate, as a good engineer will do.

4 So, in line item number 3,  
5 which is the 1430 portal, under the care and  
6 maintenance that YTG number provided us for, for  
7 example, they had targeted \$300,000 to be spent.  
8 Can you tell us what, if anything, have you done  
9 to date on this?

10 MR. PETERSSON: The information from the Camp  
11 Manager, Terry Eisenman, is that the pipeline  
12 has been upgraded. And he intends to upgrade it  
13 as required each year.

14 MR. RON JOHNSON: Do you have any idea what  
15 that costs you each time? Just ballpark number.

16 MR. PETERSSON: Approximately \$1,000 per  
17 year, was his estimate.

18 MR. RON JOHNSON: And what do you plan to do  
19 for this season and the next season?

20 MR. PETERSSON: The same as previous years;  
21 inspection and maintenance of the pipeline.  
22 Just hold on one sec.

23 MR. POLYCK: The flow out of the 1430  
24 portal is very low, and it is collected at the  
25 edge of the hillside, in a pipe, piped down the  
26 hill, under the road, and discharged into the

1 tailings pond. So, each year, in the spring,  
2 after the snow goes, we will be going back in  
3 and adjusting the pipe, for whatever needs to be  
4 done, to drain the water from the 1430 portal  
5 into the tailings pond.

6 MR. RON JOHNSON: And would the cost of this  
7 exercise, this annual exercise, be roughly the  
8 same in any year?

9 MR. POLYCK: That's correct. Possibly  
10 even less.

11 MR. RON JOHNSON: Line item number 5,  
12 maintenance of the tailings pond at the 1310  
13 metre elevation. What, if anything, have you  
14 done in regards to that; and what might be the  
15 cost that you have incurred?

16 MR. WILSON: Previously, we had discharged  
17 water less than 300 cubic metres per day, as per  
18 our permit to release. Currently, we have a  
19 monitoring program, with either staff gauges or  
20 measurements on the tailings pond, itself, to  
21 verify the level of water in the tailings pond.  
22 I'm not sure of the costs of pumping, and the  
23 costs of keeping an eye on the water elevation  
24 is, you know, one staff hour per week,  
25 approximately. It's very -- it's minimal costs.

26 MR. RON JOHNSON: And what would you plan on

1           doing in the future? Same thing, or --

2       MR. WILSON:                   Our future plans are,  
3           obviously depending on the water licence, but  
4           obtain a water treatment plant such that, if the  
5           pond elevation rose beyond where we would want  
6           to see it, and, as has been presented, typically  
7           that's in around the 1310 and a half range, to  
8           1311 -- in other words, if it gets up to within  
9           about one and a half metres of the spillway,  
10          we'd like to take it back down by a half a  
11          metre.

12                                    So we are currently looking  
13          at the purchase of a treatment plant that would  
14          allow us to release water and maintain that  
15          elevation.

16       MR. RON JOHNSON:           Now, we've heard, previously  
17          in this hearing, about the treatment plant, so  
18          I don't think I want to necessarily go in depth  
19          there. Is it your intent to bring this  
20          treatment plant on to the site sometime this  
21          coming season?

22       MR. POLYCK:                   That's correct.

23       MR. RON JOHNSON:           And I think we've got your  
24          cost estimates, which was both your capital as  
25          well as the operating costs?

26       MR. WILSON:                   The price that's been quoted

1 to us, yes, is approximately 50,000 American,  
2 plus transport. However, I guess I would add  
3 that the company is offering us some other  
4 options, and we're also, I mean, obviously,  
5 checking references and so on, to make sure that  
6 this plant does meet our needs.

7 MR. RON JOHNSON: Line item number 6, the  
8 installation of additional monitoring  
9 instrumentation. Can you tell us, now, what  
10 have you done with regard to that?

11 MR. WILSON: We have installed new flow  
12 weirs or repaired the existing ones at KR-4 N3  
13 and KR-5 S2. We have also installed the  
14 elevated meteorological station. And I guess  
15 what's left to be done is, we are planning to  
16 instal prisms to track movement on that tailings  
17 dam. And, also, as we discussed yesterday,  
18 there are some piezometers, or some monitoring  
19 wells, that are not functioning properly, and we  
20 will try and determine what the best method of  
21 repair or replacement for those is. And that  
22 work is planned for this summer.

23 MR. RON JOHNSON: Do you have any idea of what  
24 you spent to date, on doing this sort of work,  
25 and then can you give us some idea of what your  
26 additional costs will be, over this next season,

1 for the planned work that you've outlined?

2 MR. POLYCK: I think that's a bit  
3 premature. We'll find that out after the  
4 geotechnical inspection in the spring and, if  
5 there's any remedial work required, we'll try to  
6 do that as soon as possible this year.

7 MR. RON JOHNSON: Would you like to even hazard  
8 a guess?

9 MR. POLYCK: No.

10 MR. RON JOHNSON: Line item number 7, the  
11 tailings facility upgrade. YTG targeted about  
12 a hundred thousand for that. What, if anything,  
13 have you done on this item to date, and at what  
14 cost?

15 MR. WILSON: Lowering the water behind the  
16 tailings dam was a major part of our insuring  
17 that there was an increased level of safety.  
18 And we have conducted -- or, had a qualified  
19 engineer look at the dam, and there's another  
20 one scheduled for this year. As well, part of  
21 that inspection this year is to develop costs  
22 for creating the toe berm along the base of the  
23 dam.

24 MR. RON JOHNSON: Line item number 10,  
25 northwest runoff interceptor ditch. What costs  
26 have you incurred so far, do you think?

1 MR. WILSON: As I recall, the clean-out of  
2 -- there was some clean-out on both ditches, and  
3 I think it was in the tune of around seven to  
4 ten thousand dollars. I'm not absolutely sure,  
5 we did not handle that contractor, that was  
6 handled directly by Terry Eisenman. But we were  
7 there at the time to direct the clean-out.

8 MR. RON JOHNSON: What sort of costs would you  
9 expect over the next season?

10 MR. WILSON: The work I refer to occurred  
11 in 2005, and I don't believe we've had to do any  
12 additional work since. Barring anything  
13 unforeseen, I think that those interceptor  
14 ditches are functioning properly, and we  
15 anticipate them to remain functioning properly,  
16 unless there is some unusual event, and unusual  
17 rain event or some other situation, vehicle  
18 accident or something like that, that may, you  
19 know, involve those. But I don't think we  
20 anticipate having to clean those ditches every  
21 single year.

22 MR. RON JOHNSON: Okay. Line item number 11,  
23 Lower Subsidiary Creek diversion. Can you tell  
24 us what, if anything, you've done there, what  
25 the cost is, and what the next season's costs  
26 might be?

1 MR. WILSON: Actually, sorry, the answer I  
2 gave to the previous question did include this  
3 work as well.

4 MR. RON JOHNSON: Okay, good. We won't visit  
5 that one, then. Line 13 was construction of the  
6 water treatment plant, which we already know  
7 about. Line 14, tailings water treatment... we  
8 know about that one.

9 Line 16, GS&A and  
10 contractors. YTG had you targeted for about  
11 63,000+. What can you tell me about how much  
12 might you have spent in that category, what do  
13 you anticipate that you might spend?

14 MR. PETERSSON: This is done by camp staff,  
15 and the Camp Manager's not here and it's hard to  
16 separate it out from the variety of work they're  
17 doing, so we don't have a detailed answer on  
18 that.

19 MR. RON JOHNSON: Okay. The next series of  
20 line items extend from 18 through to 27, which  
21 consists of a series of plans, reports, etc.  
22 Are there any of these items that you would not  
23 wish to do, for any reason at all?

24 MR. POLYCK: No.

25 MR. RON JOHNSON: Do you have some sense of  
26 what your cost would be in providing these

1 reports; and when you might schedule them in  
2 your list of things to do?

3 MR. WILSON: I think what we're wanting to  
4 indicate is that our costs would be very similar  
5 to what has been suggested. Other than there's  
6 a few items, such as the emergency response  
7 plan, which we've already developed one, may  
8 have to be modified if equipment or materials  
9 change on the site.

10 In terms of when we would do  
11 them, some of this stuff has already been done  
12 once, and we're -- based on the analytical  
13 information, and so on, that we're currently  
14 obtaining, we are updating some of these models.  
15 So I think that that's ongoing work. When it  
16 would be done... I think you might want to say  
17 that it's done now, but it's somewhat of a  
18 dynamic thing, in that emergency response plans,  
19 for instance, need to be regularly revisited and  
20 reassessed. Likewise, the water balance needs  
21 to be regularly visited and reassessed as things  
22 change on the site.

23 And I guess the other thing  
24 I'd just want to point out is, most of this  
25 stuff we're scheduling to have completed over  
26 the next summer, and hopefully, by doing that,

1           we will be able to achieve some cost savings,  
2           rather than doing these items as individual line  
3           item -- the prices that are associated with the  
4           individual line items.

5                               Certainly, I can appreciate,  
6           doing them individually, these would be costs  
7           that we would anticipate; doing them together,  
8           we hope to have some economies of scale, and  
9           reduce those costs.

10       MR. RON JOHNSON:           So, then, do you think that  
11           the costs, which YTG's -- that is, YTG's cost  
12           estimates are roughly in about the same ballpark  
13           as what you may incur; or, in fact, that, by  
14           conducting them as you've suggested, that you  
15           may actually be able to do a little bit better  
16           than that?

17       MR. WILSON:                I believe that the YTG cost  
18           estimates are quite healthy. We could do the  
19           individual items for those costs, without too  
20           much trouble, and we could realize a savings  
21           being able to do them in conjunction with one  
22           another.

23       MR. RON JOHNSON:           Thank you. Line item number  
24           29, monitoring - supplies and services. Any  
25           idea how much you've spent to date, and what the  
26           future holds for the expenses?

1 MR. WILSON: In terms of monitoring  
2 equipment supplies, we're probably into the  
3 hundred thousand dollar range that has been  
4 spent. What's coming up will obviously depend  
5 on our licence conditions, but I think that  
6 we're able to start to fine-tune our monitoring  
7 program to actually cut back on some of our  
8 monitoring, because we feel that we've got  
9 pretty good data. And, so, up to this time,  
10 we've been collecting most areas on a bi-weekly  
11 basis, and now we're feeling comfortable that we  
12 could drop back to a monthly basis, so we could  
13 probably cut our costs.

14 I believe that the cost that  
15 we've suggested here is fairly realistic.

16 MR. RON JOHNSON: I'm sorry, I don't quite  
17 understand your last sentence.

18 MR. WILSON: I understood that you said  
19 what would it cost to go into the future.

20 MR. RON JOHNSON: Oh, yes.

21 MR. WILSON: And, to go into the future,  
22 these costs are identified for -- based on the  
23 next couple of years. And I think that the  
24 costs that we've outlined there is fairly  
25 accurate to cover -- so, in other words, I  
26 guess, to be more precise, for monitoring -

1 labour costs, and monitoring - supplies and  
2 services, you know, \$60,000, over the next  
3 couple of years, would not be unrealistic.

4 MR. RON JOHNSON: Thank you. Line item number  
5 31, the annual geotechnical inspection. YTG  
6 targeted about 30,000. How much have you  
7 possibly spent on that to date, and then where  
8 are you going with it?

9 MR. WILSON: To date, our annual  
10 geotechnical inspections are just under \$7,000;  
11 and I would anticipate that, in the coming year,  
12 it may be a little bit higher than that, because  
13 there's more detail being requested.

14 MR. RON JOHNSON: So, 7,000+?

15 MR. WILSON: Correct. Yes, I would agree.

16 MR. RON JOHNSON: Line item 32, reporting.  
17 Here, we're not dealing with the reporting for  
18 the permanent closure, but rather for the care  
19 and maintenance phase of things here. How much  
20 do you think you've spent so far on reporting?

21 MR. WILSON: Once again, the reporting  
22 aspect is probably in the five to \$7,000  
23 range... per year, that is.

24 MR. RON JOHNSON: So you would expect that this  
25 coming year, and the year after that, it's going  
26 to be roughly about the same thing again?

1 MR. WILSON: I would expect the reporting  
2 for the water quality monitoring to be about the  
3 same, yes. I would anticipate we might spend a  
4 little bit more on geotechnical work coming up  
5 this year.

6 MR. RON JOHNSON: Line item number 33,  
7 maintenance - supplies and services. YTG  
8 targeted you for about 30,000. How much have  
9 you spent to date, where do you think you're  
10 going with it?

11 MR. WILSON: Unfortunately, Terry, the  
12 Camp Manager, is not here, so I'm not sure what  
13 has been spent to date. I know that we did run  
14 these figures by him, or he had input into these  
15 figures, so I have to assume that the upcoming  
16 figures would be in the neighbourhood of --  
17 yeah, it's probably going to be in the  
18 neighbourhood of seven to 10,000 per year.

19 MR. RON JOHNSON: Maintenance - labour, line  
20 item number 34. How much do you think you've  
21 spent so far?

22 MR. WILSON: My understanding is eighteen  
23 to 20,000 per year. And, for future costs, we  
24 anticipate them remaining in that neighbourhood.

25 MR. RON JOHNSON: Line item 35, a contingency.  
26 In your opinion, is this 20% a realistic

1 percentage?

2 MR. POLYCK: Yes. That's the usual, I  
3 think, for contingencies in this type of  
4 project.

5 MR. RON JOHNSON: Thank you. Back to you, Mr.  
6 Chairman.

7 MR. WILLIS: Stephen Johnson?

8 MR. STEPHEN JOHNSON: Yes, thank you, Mr. Chair. I  
9 have a number of questions, starting with page  
10 2 of Exhibit 6.1.

11 MR. WILLIS: Well, I'm just looking at the  
12 time. I have a feeling you're going to be more  
13 than five minutes.

14 MR. STEPHEN JOHNSON: Absolutely.

15 MR. WILLIS: All right, so, we normally  
16 break for an hour and a half... do people want  
17 to come back at 1:15, or 1:30 would be the more  
18 appropriate time?

19 MR. POLYCK: 1:30 would be fine.

20 MR. WILLIS: Thank you. Mr. Soprovich?

21 MR. SOPROVICH: 1:15 would be okay with me.

22 MR. MCDONNELL: 1:15 would be fine with us,  
23 too.

24 MR. POLYCK: Why split hairs... 1:15.

25 MR. WILLIS: All right, we'll resume at  
26 1:15.

1 (Proceedings adjourned at 11:45 a.m.)

2 (Proceedings reconvened at 1:15 p.m.)

3 MR. WILLIS: Good afternoon... resumption  
4 of this hearing, questions from Stephen Johnson  
5 to the applicant.

6 MR. STEPHEN JOHNSON: Thank you, Mr. Chair. With  
7 respect to Exhibit 6.1, page number 1, the third  
8 sentence in the last paragraph: "KRH will  
9 continue these activities and programs in  
10 accordance with a water licence, once issued."

11 I'm a little unclear what is  
12 meant by that. Is it that activities are going  
13 to stop until the water licence is issued; or  
14 how does that work for you folks?

15 MR. WILSON: What we are referring to is  
16 ongoing cleanup activities, and ongoing  
17 monitoring activities on site, and I guess, more  
18 correctly, that should say "... will continue on  
19 our present course until such time as a licence  
20 is issued...", and then we would obviously  
21 follow the licence.

22 MR. STEPHEN JOHNSON: Okay, thank you. Now, at  
23 page 2, Exhibit 6.1, recommendation numbered 2,  
24 you've mentioned that you're not in favour of  
25 the 1310.2 elevation. My question is what  
26 minimum elevation would you take the pond to?

1           There have been some suggestions from  
2           Environment Canada, I believe, about a reduced  
3           amount of water in the tailings would help to  
4           oxidize some of the material and, therefore,  
5           arsenic would be liberated for dispersal into  
6           the environment. Do you have a minimum  
7           elevation you'll take the pond to?

8           MR. POLYCK:           I think that will depend a  
9           lot on what we deal with this summer, in terms  
10          of a geotechnical inspection of the dam and the  
11          facilities.

12          MR. WILSON:           Further to that, in the  
13          previous geotechnical evaluations, there was two  
14          different elevations that were suggested. One  
15          was 2 metres below the invert elevation of the  
16          spillway; one was 2.5 metres below the invert  
17          elevation of the spillway. We would anticipate  
18          that, as we collect more information, there may  
19          be a situation where it would be prudent to  
20          lower the tailings beyond the 2 metre mark,  
21          which, in this case, would be 1310 metres above  
22          sea level. And, therefore, we're not concerned  
23          -- or, we are concerned that there's not  
24          sufficient evidence to say that that's the magic  
25          elevation where all problems will start or stop.  
26          We just want a bit more flexibility there

1           because, obviously, the lower the pond level is,  
2           the less water is retained behind that dam, and  
3           that is one of the issues at the site, is the  
4           stability of that dam, given the water load  
5           behind it, and the potential for seismic  
6           activity.

7           MR. STEPHEN JOHNSON:     Thank you.     With respect to  
8           the second sentence, "Notification to the Board  
9           14 days in advance of any surface discharge from  
10          the tailings pond...", there's nothing in your  
11          documentation whether you agree with that or  
12          not.     Is that agreeable to you?

13          MR. POLYCK:                 We don't have any problem  
14          with that.

15          MR. STEPHEN JOHNSON:     Now, with respect to the  
16          security cost estimates -- and pardon me while  
17          I revisit some of the items that my colleague  
18          brought up earlier -- we heard this morning,  
19          from EBA, Mr. Wilson, with respect to some of  
20          these costs.     However, Mr. Wilson mentioned that  
21          some of these items were done by mine staff who  
22          are not here.                 However, there are  
23          representatives of the company here who, I  
24          should think, collect costs for their operation,  
25          and probably understand them.

26   Can           the           company

1           representatives give some idea of what these  
2           costs are?     For instance, number 10, the  
3           northwest runoff interceptor ditch, I believe  
4           Mr. Wilson said it was somewhere between seven  
5           and \$10,000 by the company. Does the company  
6           have records on that, that are clearer?

7           MR. POLYCK:                   Unfortunately, Terry  
8           Eisenman, the Site Manager, is not here, and we  
9           can't really comment on exactly how much money  
10          is required to maintain that ditch. It simply  
11          requires equipment time to go in there and clean  
12          out the sediment.

13          MR. STEPHEN JOHNSON:     Quite right. However, I  
14          would assume that the company representatives  
15          should have your own monthly operating costs in  
16          front of you... or do you not have those with  
17          you?

18          MR. POLYCK:                   I'm sorry, I haven't been  
19          with the company all that long, so I can't  
20          address that.

21          MR. DICKSON:                  I don't have those costs at  
22          hand.

23          MR. STEPHEN JOHNSON:     Okay, thank you. Number 7,  
24          the tailings facility upgrade. There's been  
25          recommendations by both SRK Consulting, Exhibit  
26          1.5.3, as well as EBA, in constructing this. I

1           may have misunderstood, I apologize... are you  
2           planning on constructing it this summer, after  
3           your geotechnical assessment?

4       MR. POLYCK:                    Are you referring to the toe  
5           buttress?

6       MR. STEPHEN JOHNSON:        Yeah, the toe berm, yeah.

7       MR. POLYCK:                    I think I said before, if  
8           we're allowed to do that, or we're permitted to  
9           do that, without a licence, then we probably  
10          will go ahead and do that. I've already  
11          discussed that with EBA Engineering, and they  
12          are going to come up with a design -- an actual  
13          engineered design for the toe buttress.

14       MR. STEPHEN JOHNSON:        Thank you. Number 10 and  
15          number 11, together... can you tell me how many  
16          times, since the mine has started, the problem  
17          has arisen with these two diversions, where  
18          water's not been flowing where it should, it's  
19          gone into the tailings impoundment?

20       MR. POLYCK:                    There isn't a mine  
21          specifically there right now. But the northwest  
22          runoff interceptor ditch, and this once in  
23          awhile Subsidiary Creek, they do require  
24          maintenance. Since 2004, there's been staff on  
25          site full time, 24 hours a day, that can deal  
26          with this, and they can inspect it on a daily

1           basis.    It hasn't happened very often that  
2           either one of them has been plugged to the  
3           extent that they're not operational.

4       MR. WILLIS:                   Excuse me, I thought I heard  
5           Mr. Dickson say 2005, so... which is it?

6       MR. DICKSON:                 2005, we've been on the site  
7           continuously; 2004, we were there for a short  
8           period of time during the summer and during the  
9           winter.

10      MR. WILLIS:                   Thank you.

11      MR. STEPHEN JOHNSON:        Again, with respect to this,  
12           do you have any history on when these problems  
13           did occur, and the reason for it, was it due to  
14           precipitation, heavy precipitation, or whatever,  
15           and the costs that they incurred back then?

16      MR. POLYCK:                  I'm sorry, I don't have those  
17           -- that information available.

18      MR. STEPHEN JOHNSON:        Now, with respect to number  
19           14, tailings water treatment, your comment is:  
20           "YTG's estimate is calculated for a 20-year  
21           period; this should be a 10-year period as other  
22           closure estimates." I'm not sure what you mean  
23           by "other closure estimates." Is that for other  
24           closure estimates that you folks have done; or  
25           is that from other mine sites?

26      MR. POLYCK:                  I can't really quote on YTG's

1 figures, but I believe Mr. Januszewski based his  
2 permanent closure estimates on a 10-year plus  
3 basis.

4 MR. STEPHEN JOHNSON: I'm not sure that's correct.  
5 It says here, YTG's estimate, which is probably  
6 from -- I should think is from SteveJan -- is  
7 for 20 years. However, the words, "this should  
8 be", I think are words that are said by KRH.

9 MR. PETERSSON: When we reviewed Steve  
10 Januszewski's cost estimate, his general  
11 approach was, for the permanent closure, to look  
12 at the 10-year period. My understanding is,  
13 that was done for other components, except for  
14 this component. This appeared to have a 20-year  
15 estimate or span.

16 So, what we're saying is that  
17 we're looking for the consistency, to apply the  
18 same time span, to this item, as the other  
19 items.

20 MR. STEPHEN JOHNSON: Thank you, I understand.  
21 With respect to number 29, monitoring - supplies  
22 and services, given a 10-year period after  
23 closure, is the 76,000 enough to cover that  
24 aspect?

25 MR. PETERSSON: We didn't have any objections  
26 to Yukon's estimate on that.

1 MR. STEPHEN JOHNSON: Have you done an estimate,  
2 yourself, with respect to your -- has the  
3 company done any type of forward budgeting, as  
4 far as this goes, in terms of the experience  
5 they've gained in costs for monitoring and  
6 sampling, that that would be sufficient?

7 MR. WILSON: I wouldn't say we've done  
8 detailed cost estimates. When we looked at that  
9 figure, and we looked at what we spent in the  
10 past, and we thought about the fact that closure  
11 would involve decommissioning the tailings, we  
12 felt that that was a reasonable number.

13 MR. STEPHEN JOHNSON: Thank you. That's the end of  
14 my questions, thank you.

15 MR. WILLIS: Thank you. Mr. Keenan.

16 MR. KEENAN: It's in Environment Canada's  
17 recommendation number 2 --

18 MR. WILLIS: What page, please?

19 MR. KEENAN: Page 2, Exhibit 6.1,  
20 recommendation number 2. And I was wondering if  
21 you could elaborate on the monitoring program  
22 there, and how often you do the monitoring. It  
23 was just stated that: "Environment Canada's  
24 rationale is not supported by water monitoring  
25 results from the past year...", and I was just  
26 wondering if you could elaborate a little bit on

1           your monitoring results, your program, and how  
2           often it's done there.

3       MR. WILSON:                    The results that we're  
4       referring to, there, is results from seepage  
5       coming out of the tailings pond, and we collect  
6       those results every two weeks. And those  
7       results have shown that, for approximately the  
8       last, I think it's six months now, we have  
9       maintained water quality that is quite a bit  
10      lower than when we had water over top of the  
11      tailings. So we feel that this is an indication  
12      that, by lowering the water level in the  
13      tailings pond, we reduce seepage and reduce the  
14      concentration of arsenic in the seepage.

15                                    But, to answer your question,  
16      I think it's every two weeks that we sample  
17      that, those monitoring locations.

18      MR. KEENAN:                   Thank you. If I could,  
19      then... did you say for the past six months?

20      MR. WILSON:                    If you give me a minute, I'll  
21      pull out the larger version of our graph, so  
22      that I can actually check the dates.

23                                    Yes, it appears that, since  
24      November of 2006, we've had water quality, or  
25      arsenic concentrations, drop below .2 parts per  
26      million, and remain down there. I believe

1           that's in November sampling. The scale is  
2           somewhat large, it is difficult to see, but this  
3           was one of our slides in Exhibit 8.1.

4           MR. KEENAN:                    Okay, thank you. And you  
5           said November the 6<sup>th</sup>, that was the last -- or,  
6           was that when the start -- can you tell me how  
7           long that program's been running in that  
8           particular location?

9           MR. WILSON:                    Actually, November 2006, so  
10          last November. We started monitoring those  
11          stations in July of 2005, and we have been able  
12          to monitor them fairly consistently since that  
13          time. There has been the odd occasion where we  
14          may have missed a sampling event because of  
15          weather, or because of some other difficulty,  
16          but, for the most part, we've been able to  
17          monitor those, continuously, on a bi-weekly  
18          basis, so every second week, since 2005 -- July,  
19          2005.

20          MR. KEENAN:                    Thank you.

21          MR. WILLIS:                    Thank you, Mr. Keenan. Our  
22          technical consultant....

23          **THE WATER BOARD'S TECHNICAL CONSULTANT QUESTIONS**  
24          **KETZA RIVER HOLDINGS**

25          MR. LORIMER:                    I have a few questions. The  
26          first one I'd like to ask is a point of

1 clarification, and it was a response that was  
2 provided by the applicant, to a question from Ms  
3 Leckie, earlier on. And I'd like to refer,  
4 again, to Exhibit 6.1, page 8. Specifically,  
5 I'd like to look at the table, which is not the  
6 bottom table on that page but the one above it,  
7 that has a sentence preceding it that says: "KRH  
8 proposes the following compliance criteria for  
9 these discharge points..."

10 There was some discussion  
11 about those numbers and how they correlated with  
12 the information in Exhibit 8.1.1; and there was  
13 some information back and forth, and I saw some  
14 nods, but I want to be absolutely sure that  
15 we're clear about this, and that there's no  
16 confusion later on.

17 So, could the applicant go  
18 through that list, in that table, and provide  
19 the corrected numbers for each item?

20 MR. WILSON: The numbers for total  
21 arsenic, that KRH is proposing, is 0.5  
22 milligrams per litre; for total cyanide, 1.0  
23 milligrams per litre; for total copper, 0.3  
24 milligrams per litre; for total lead, 0.1  
25 milligrams per litre; total nickel, 0.3  
26 milligrams per litre; total zinc, 0.3 milligrams

1 per litre; and total ammonia remains the same,  
2 at 1.0 milligrams per litre.

3 MR. LORIMER: Thank you, Mr. Wilson. The  
4 following questions all relate to Exhibit 6.1.

5 The first question is in  
6 regard to page 2 of that exhibit, recommendation  
7 number 2, your item number 1. The last sentence  
8 of the second paragraph reads: "The additional  
9 benefit with lower water level in the tailings  
10 pond is the reduced hydraulic head in the  
11 tailings pond, which reduces the amount of  
12 seepage at KR04 and KR05."

13 My question is, do you have a  
14 correlation between pond elevation and seepage  
15 rate?

16 MR. WILSON: We do not have a correlation,  
17 no. We know that, since we've lowered the  
18 tailings pond, we do have reduced flow and  
19 reduced arsenic in there, but I don't have a  
20 correlation between the two.

21 MR. LORIMER: How significant is this?

22 MR. WILSON: Without the data in front of  
23 me, I'm going to have to draw upon my memory,  
24 and I believe it's about one half. We were able  
25 to reduce seepage by about one half. But this  
26 is tricky to interpret, because, of course,

1           rainfall and other factors, snow melt and  
2           groundwater recharge, have a fairly significant  
3           impact on that seepage. It's very small, so any  
4           slight changes, you know, make a huge difference  
5           in terms of the percentage of the seepage. I  
6           mean, if you're talking volumes of a few litres  
7           per second, a very minor change in rainfall or  
8           snow significantly affects that.

9           MR. LORIMER:                    So, from your response, then,  
10           I gather that you believe that the seepage rate  
11           was reduced roughly by half, for a reduction of  
12           about 1.5 metres in the pond elevation; have I  
13           got that correct?

14          MR. WILSON:                    Yes. That would be my best  
15           guess here.

16          MR. LORIMER:                    Fair enough. Then, how much  
17           seepage are we talking about? What's the flow  
18           rate at KR-04?

19          MR. WILSON:                    My apologies, I did have that  
20           stuff, that information, with me. I do know  
21           that, in the combined flow of 4 and 5, we're  
22           looking in the neighbourhood -- and there's a  
23           seasonal variation here -- but I think the  
24           maximum that we've seen is slightly in excess of  
25           250 cubic metres per day, was the maximum.

26    Just to clarify, that's both

1 seepage zones combined, or added together.

2 MR. LORIMER: Yes, I understand. I think  
3 that's adequate.

4 Moving on to page 3 of the  
5 Exhibit, recommendation 4, there's been quite a  
6 bit of discussion about this, and the number,  
7 I'll call it "concentration" without calling it  
8 anything more, at KR-08. Mr. Wilson, in  
9 response to a question this morning, I think it  
10 might have been from Mr. Soprovich, you  
11 indicated that there were things that you could  
12 do if the concentration at that location  
13 increased above whatever number it might be; and  
14 you suggested that there were two things, one  
15 would be to cease discharge, and the other would  
16 be to reduce discharge. Did I get that correct?

17 MR. WILSON: Yes, that's correct.  
18 Assuming that we are, in fact, discharging. I  
19 mean, we have to understand that discharge is  
20 not a continuing thing, in terms of discharging  
21 treated water from the tailings pond.

22 MR. LORIMER: You've proposed, or made the  
23 -- I guess "proposed" -- you've said KRH can  
24 agree, in Exhibit 6.1, on this item, and to .02  
25 milligrams per litre, for KR-8, as a monthly  
26 average.



1 MR. LORIMER: Given that, and given the  
2 information here, now, does a bi-weekly sample,  
3 during a discharge, seem to be frequent enough  
4 to allow you to respond if concentrations  
5 increased at station KR-08?

6 MR. WILSON: Bearing in mind that we would  
7 be monitoring discharge from the end of the  
8 pipe, I would think that, yes, it would, given  
9 our ability to control that.

10 MR. LORIMER: I want to try to avoid  
11 getting into circular logic here, but you  
12 suggested, in response to Mr. Soprovich, that an  
13 increase in concentration at KR-8 could allow  
14 you to reduce a discharge. And my question now  
15 is, if that is the case, then is a bi-weekly  
16 sample, at KR-8, frequent enough to allow you to  
17 make that response in an appropriate manner?

18 MR. WILSON: Taking into consideration  
19 that we use the water quality model to predict  
20 what water quality should be, we anticipate it  
21 would. In fact, so far, we've been able to do  
22 it. However, I understand your point, that  
23 there are things beyond our control, so that, if  
24 there was a spike there, we would need to react  
25 quickly.

26 I'm thinking, if it's not

1           quick enough, what would be quick enough, and...  
2           I still think that, by monitoring our output,  
3           and using the model, that we would be able to  
4           achieve some measure of control, so that we  
5           could anticipate if we are going to have a  
6           potential for exceeding that.

7                               Further to that, we've also  
8           undertaken to purchase field monitoring  
9           equipment, and we do have technical  
10          specifications on some pieces of equipment that  
11          we're currently evaluating, and our intent is to  
12          use those, as well, to assist us to get more  
13          instantaneous results.       Those are not  
14          necessarily defensible in a court of law, but  
15          they certainly do give us a more immediate idea  
16          of what we're dealing with.

17                              So I can see where those, in  
18          combination with our lab analysis, to verify  
19          that our results are consistent with what the  
20          lab is receiving, would give us the ability to  
21          monitor stations more quickly.   Typically, by  
22          the time we take a sample, and get it to a lab,  
23          and get results back, even if we use rush  
24          analysis, we're looking at about four days.   So,  
25          certainly, we recognize that there is a lag  
26          time, and we are trying to address that.

1 MR. LORIMER: Maybe we've taken this as far  
2 as we can. I wasn't trying to come up with an  
3 answer to this, I was raising the issue, and  
4 doing it in the context of your having  
5 identified this as a management tool. And so my  
6 question is, how would you see yourself using  
7 that as a management tool?

8 So, if there's nothing  
9 further that you can provide, then we'll leave  
10 it at that.

11 MR. WILSON: Yeah, I don't think there's  
12 anything further we can provide.

13 MR. LORIMER: My next question relates to  
14 page 4 of Exhibit 6.1, and it's recommendation  
15 7 that I'm looking at.

16 As I read this, what I  
17 understand is that KRH is not agreeing to the  
18 suggestion that these three studies, the  
19 sediment analysis, the periphyton composition  
20 and the invertebrate monitoring program be  
21 carried out under this licence. Am I correct in  
22 my understanding of what that says?

23 MR. POLYCK: I don't believe it fits in  
24 with the scope of our application, but I think  
25 that we can agree that we can do this once in  
26 the two year term of the licence.



- 1 MR. WILSON: I was afraid you were going  
2 to ask that question. Portal 1430, and --
- 3 MR. POLYCK: I think we can agree to  
4 conduct a seep survey program, since there is  
5 very few seepage points. And I think we're  
6 doing that by monitoring the 1430 portal. The  
7 waste rock dumps and the open pits, I don't  
8 believe produce any seepage. However, we will  
9 conduct a survey, this summer, to check it out.
- 10 MR. LORIMER: When you say you can agree to  
11 carry out a seep survey, within what scope?
- 12 MR. POLYCK: Within the scope as indicated  
13 here, the underground workings, open pits and  
14 waste rock dumps.
- 15 MR. LORIMER: When could you do that, and  
16 when could you submit the results of that?
- 17 MR. POLYCK: I would suggest some time  
18 after the snow disappears.
- 19 MR. WILSON: Perhaps I can provide a bit  
20 more on that. Portal 1430 sometimes does not  
21 thaw out until July. In fact, one year, I think  
22 there was no seepage from it. So I would think  
23 that the timeframe to do the work is probably  
24 more in the neighbourhood of August; and then  
25 reporting following that.
- 26 MR. LORIMER: When could that reporting be

1 completed?

2 MR. WILSON: I would think October,  
3 September/October, in that range.

4 MR. LORIMER: Thank you. Turning to page 6  
5 of Exhibit 6.1, and this deals with page 22  
6 (xxii) of Yukon Government's intervention. You  
7 have indicated that you're not in favour, if I  
8 interpret this correctly - and correct me if I'm  
9 wrong - you're not in favour of the structure  
10 management and maintenance plan being completed  
11 and submitted. Am I interpreting that  
12 correctly?

13 MR. POLYCK: I think we went over this  
14 issue before, but... what we're --

15 MR. LORIMER: Maybe I could just jump in  
16 there. I think we did talk about it earlier, or  
17 it was talked about earlier, and there was a  
18 comment from someone on the applicant's side,  
19 that it wasn't an onerous thing to do. But I  
20 don't recall hearing an agreement that the  
21 applicant would do it. So that's what I'm  
22 checking now.

23 Was there an agreement to do  
24 that?

25 MR. POLYCK: I did say it wouldn't be  
26 onerous, and I think we can do that within a

1 month.

2 MR. LORIMER: Thank you. I now have some  
3 questions with regard to attachment 1 to Exhibit  
4 6.1, which is the applicant's Review of Security  
5 Cost Estimates.

6 Item 12 has been previously  
7 discussed, but I have a couple more questions  
8 about it. The comments from the applicant seem  
9 to suggest that this is a less significant piece  
10 of work than might have been suggested by the  
11 Yukon Government's estimate.

12 I had the impression, after  
13 the discussion earlier, that this narrowing of  
14 the channel is essentially debris removal,  
15 although that terminology was not used. But  
16 there was discussion of boulders and such like.  
17 So, can you just expand a little bit on what  
18 this piece of work actually is?

19 MR. POLYCK: It is actually a drop  
20 structure, to dissipate the energy of the flow  
21 of Cache Creek; and it's a series of cascading  
22 falls composed of boulders, somewhat similar to  
23 the Rose Creek diversion in Faro, if you're  
24 familiar with that.

25 The reach we're talking about  
26 is probably within the neighbourhood of 15 to 20

1 metres in length.

2 MR. LORIMER: And what are you proposing to  
3 do there?

4 MR. POLYCK: We're proposing to monitor  
5 the site, to see if there's any significant  
6 changes. As I said before, in my past life, I  
7 used to monitor this facility, and we haven't  
8 seen very much in the way of changes over the  
9 years. There has been some shifting of the  
10 boulders, but that's about it.

11 MR. LORIMER: I may be confused here, so  
12 correct me if I am. I believe Mr. Wilson, this  
13 morning, talked about having received a quote,  
14 from contractor, to do some work here. Did I  
15 misread that, did I mishear that?

16 MR. POLYCK: I don't believe so. But we  
17 were referring to some of the work required to  
18 remediate the soil creep above the diversion  
19 area, which we would anticipate would require  
20 some work out of the watercourse, but to pull it  
21 back and stabilize it. As well as shifting some  
22 of the boulders.

23 This work would be conducted  
24 under the guidance of a professional engineer.

25 MR. LORIMER: So there are two actions  
26 taking place here, or proposed to take place.

1           One is a monitoring function, and the other one  
2           is an actual scaling of the slope above the  
3           site, if you will, and some rearrangement of the  
4           boulders in the energy dissipation structure; is  
5           that correct?

6           MR. POLYCK:                   That's essentially correct,  
7           yes.

8           MR. LORIMER:                 And you have a quotation from  
9           a contractor to do that, but no design on which  
10          the contractor has actually provided a price; is  
11          that correct?

12          MR. WILSON:                 Yeah, correct.     We had a  
13          conceptual concept that we proposed to do the  
14          work, and it was actually Terry Eisenman, the  
15          Camp Manager, who contacted the contractor, so  
16          I'm not sure how much information he had passed  
17          on to him.     But, certainly, we had discussed  
18          this, and said what kind of work and what size  
19          of an area were we looking at.

20          MR. LORIMER:                 Where I'm going with this is  
21          to try and connect the cost number to what's  
22          lead to it.     Earlier, you made a comment about  
23          having talked to an engineer, and you also  
24          commented about it not being a final design.  
25          I'm getting the impression that maybe it's a  
26          conceptual design at best.



1           of information. Mr. Terry Eisenman would have  
2           that.

3           MR. LORIMER:                    I guess we'll move on to the  
4           next question. There was a question from Mr.  
5           Ron Johnson also about -- and I'd have to just  
6           take a minute, here, to get the proper  
7           reference. Just bear with me for a second here.

8    This was in reference to a  
9           cost item in Government of Yukon's estimate,  
10          which is in Exhibit 5.5.4, and it's a line item  
11          that's entitled "Instal Additional Monitoring  
12          Instrumentation". And it includes a number of  
13          items, including weirs, piezometers, etc.

14   My question is, in response  
15          to a question that I asked Mr. Wilson, I believe  
16          yesterday, or somebody else did, I can't  
17          remember who, indicated that the weirs that are  
18          at stations 04 and 05 are not actually being  
19          used as flow measurement weirs, they're being  
20          used as points at which flow is concentrated,  
21          and the actual flow measurements are then  
22          established using a bucket. So my question is,  
23          is there some additional work that needs to take  
24          place at these locations, to calibrate these  
25          weirs and to make them fully functioning flow  
26          monitoring locations?

1 MR. WILSON: We feel that we get pretty  
2 good information on flow from them, but we could  
3 take a look at them and see if there's something  
4 else we could do. Given that there's very low  
5 flow there, and obviously in the wintertime it  
6 freezes up and the channel changes and the weirs  
7 are ineffective at that time, it is somewhat  
8 difficult to get consistent readings,  
9 particularly in the winter. Summertime, it's  
10 usually not a problem. But I see no problem in  
11 re-looking at those and seeing if we can improve  
12 the structure.

13 MR. LORIMER: At this point, though, you're  
14 not proposing to do anything different from what  
15 exists there at this time?

16 MR. WILSON: No, we feel fairly confident  
17 in the information we're getting from those  
18 weirs, in terms of, you know, any time that we  
19 have been able to collect flow measurements. So  
20 we didn't have anything planned in terms of  
21 changes to that.

22 MR. LORIMER: Again referring to attachment  
23 1, item 3, which is the 1430 portal, there's  
24 been previous discussion about your proposed  
25 bulkhead at that point, and your estimated cost  
26 for that. Again, I'd like to just test, and

1 find out what level of design has gone into this  
2 bulkhead.

3 You have received, I  
4 understand, a contractor's estimate, and what is  
5 that estimate based on, in terms of design?

6 MR. WILSON: Once again, this is an item  
7 that Terry had discussed with us, and then  
8 proceeded to provide information to the  
9 contractor, who then, in turn, provided an  
10 estimate based on the information provided. I'm  
11 sorry, I don't know how much detail Terry had  
12 provided him. I mean, he has provided some  
13 details in the breakdown of this cost estimate,  
14 but there wasn't what you would call a detailed  
15 design for this.

16 MR. LORIMER: Thank you. Dropping down in  
17 that table, again, to item 14, which is the  
18 tailings water treatment, what is your expected  
19 lifespan of the treatment plant that you're  
20 considering for this site?

21 MR. WILSON: We're certainly expecting the  
22 lifespan of the plant to outlast the proposed  
23 licence application of two years, given that we  
24 aren't going to be operating this on a  
25 continuous basis. We see this plant as  
26 operating on a batch basis. So I would assume

1           that the plant would have in excess of two years  
2           of lifespan, and we would be operating it  
3           periodically within that two years.

4                           It's somewhat difficult for  
5           me to answer that question, given that we don't  
6           really know how often -- in fact, we expect we  
7           may never have to operate that plant. But,  
8           certainly, two to five years seems reasonable.

9           MR. LORIMER:           Let me rework the question a  
10          little bit. Your number here, of \$150,000, is  
11          your number for what you've referred to as  
12          permanent closure. So my rephrased question,  
13          then, is, how long, under permanent closure,  
14          would you expect the treatment plant to operate  
15          for, dependably?

16          MR. WILSON:           It would take us, at the  
17          capacity of the plant, approximately two years  
18          to lower the tailings pond to the point that we  
19          could decommission it. So, to answer your  
20          question, we would operate the plant for two  
21          years, before we had removed enough water from  
22          the tailings pond to work and remove the dam.

23          MR. LORIMER:           That's an interesting piece  
24          of information. It suggests that we have the  
25          beginning of some understanding of  
26          decommissioning of this site; that there's some,

1           at least in conceptual form, intent to drain the  
2           pond, as opposed to some ongoing treatment for  
3           some period of time. Am I understanding that  
4           correctly?

5       MR. WILSON:                   Yes, that is correct. In  
6           fact, that is the conceptual plan that was  
7           provided. And I'm just trying to grab the exact  
8           exhibit number. I believe it was about October  
9           of 2006 --

10       MR. PETTERSSON:             Exhibit 1.3, Supplementary  
11           Information.

12       MR. LORIMER:                Thank you for that. I should  
13           have known that, my head is full.

14       MR. WILSON:                   Just further to that, Exhibit  
15           1.5, Supplemental Information, EBA, June 15<sup>th</sup>,  
16           page 5 -- oh, I'm sorry. No, my mistake. I got  
17           confused there. No, the initial exhibit number  
18           that Mr. Pettersson gave is the correct one.

19       MR. LORIMER:                Thank you. Item 31, in  
20           attachment 1 of Exhibit 6.1, is annual  
21           geotechnical inspection. And your comment is  
22           that the item is already covered in Table 3.6.

23                                    Could you just review that  
24           for me, because I'm not sure that I follow what  
25           you're saying there.

26       MR. PETTERSSON:             You have a good observation.

1           Initially, we reviewed the entire cost estimate,  
2           both care and maintenance and permanent closure,  
3           and this reference was put in at that time.  
4           Now, the appendix we supplied only had permanent  
5           closure. So, in fact, the reference -- the  
6           reference is not correct at this time.

7                                 However, to do an annual  
8           geotechnical inspection during each year, during  
9           10 years during permanent closure, indicates  
10          that you have started to take the tailings dam  
11          down. We're wondering, or questioning, once the  
12          tailings dam has been taken down, whether you  
13          need to continue to do an annual inspection.

14         MR. LORIMER:                 Let me ask you the  
15          question... do you think there will be a need  
16          for any geotechnical inspection during permanent  
17          closure?

18         MR. WILSON:                 Given that we don't have a  
19          finalized plan, that's hard to say. But,  
20          certainly, the conceptual plan is that if we  
21          remove the tailings dam, we wouldn't be  
22          conducting geotechnical inspections, of the same  
23          vigour, following the removal of the dam.

24                                 I guess, to answer your  
25          question, I'm sure that you'd want to continue  
26          geotechnical investigations, to make sure that

1 things were stable, but I don't think that would  
2 be an annual inspection of the same intensity,  
3 or the same -- requiring the same amount of time  
4 as you would inspecting a dam.

5 MR. LORIMER: Thank you. Next item down is  
6 item 32, which is reporting. And your comment  
7 is "Estimate is too high". GY, in its  
8 intervention, had 100,000, and you have proposed  
9 50,000. Is this the item, Mr. Wilson, where you  
10 suggested this morning that Government of  
11 Yukon's estimate was, to use your word I think,  
12 robust, and that you thought, by combining some  
13 of these, you could have some savings? Is this  
14 what that is?

15 MR. WILSON: No, actually, I think, when I  
16 was referring to those estimates, they were for  
17 the line items in Table 3.6. This number, here,  
18 as I recall, is based on our actual costs, that  
19 we're incurring right now. And we're producing  
20 reports right now, and we're certainly able to  
21 produce them for less than the estimated costs.

22 MR. LORIMER: A general question I have for  
23 you is, first of all, what is the company's  
24 fiscal year?

25 MR. DICKSON: The company's fiscal year  
26 ends on December 31<sup>st</sup>.

1 MR. LORIMER: Thank you. How much has the  
2 company spent at that site in the year 2006?  
3 MR. DICKSON: Total costs spent at the  
4 site, in the year 2006, would be in the order of  
5 \$9 million.  
6 MR. LORIMER: Does that include costs in  
7 addition to what you refer to as care and  
8 maintenance; does that include exploration and  
9 things?  
10 MR. DICKSON: Yes, the majority of that is  
11 exploration; the vast majority.  
12 MR. LORIMER: So, how much of that would  
13 relate to what you refer to as care and  
14 maintenance?  
15 MR. DICKSON: Including the billings from  
16 EBA, the costs would be about \$500,000.  
17 MR. LORIMER: And what about 2005?  
18 MR. DICKSON: Approximately the same  
19 amount.  
20 MR. LORIMER: And what are you budgeting  
21 for this year?  
22 MR. DICKSON: About the same amount.  
23 However, I have to say that we are willing to  
24 increase our budget for specific situations.  
25 MR. LORIMER: Do you have projections  
26 beyond fiscal year 2007?

1 MR. DICKSON: We don't have specific  
2 budgets for beyond the year 2007.

3 MR. LORIMER: One final question. This  
4 goes back to the closure, permanent closure of  
5 the tailings impoundment. Conceptually, what is  
6 your anticipated action there; is it to lower  
7 the pond, breach the dam; or lower the pond,  
8 remove the dam? What do you see being the scope  
9 of that, at this point?

10 MR. WILSON: Lower the pond, breach the  
11 dam, remove a section of it, and reestablish  
12 Cache Creek into an original drainage course  
13 that went through that area. Not the exact  
14 original course, but reestablish it in an area  
15 fairly consistent with where it used to run.

16 MR. LORIMER: Thank you, I have no further  
17 questions.

18 MR. WILLIS: We're going to take a 10-  
19 minute break, at 25 minutes to, and then we'll  
20 conclude with closing remarks.

21 (Proceedings adjourned)

22 (Proceedings reconvened)

23 MR. WILLIS: At this point, we'll proceed  
24 to closing submissions, so the first one would  
25 be Government of Yukon.

26 MR. MCDONNELL: Thank you, Mr. Chairperson.

1           **GOVERNMENT OF YUKON CLOSING SUBMISSION**

2           MR. MCDONNELL:                   In light of the applicant's  
3    comments today and yesterday, that they would  
4    support inclusion of licence conditions speaking  
5    to a water structure maintenance and monitoring  
6    plan, that addresses the dam and diversion  
7    structures, amongst others, and a  
8    decommissioning plan, I will restrict my closing  
9    remarks to the two issues where the Yukon's view  
10    seems to diverge from the company. These are:  
11    the determination of the appropriate discharge  
12    standards that will apply to any release of a  
13    waste into water, and an associated water  
14    quality monitoring program; and the need for the  
15    applicant to furnish and maintain security under  
16    the *Waters Act*.

17    With respect to discharge  
18    standards, we submit that the standards  
19    established must be adequate to insure, to the  
20    fullest extent possible, that fish and wildlife,  
21    and human use of the water, is not compromised  
22    by deteriorated water quality. The Ross River  
23    Dena Council has indicated to the Board the  
24    importance of this area to their people. The  
25    standards must be adequate to protect these and  
26    other users.



1 is to enable water use, and the deposit of waste  
2 into water, to occur in such a way that water  
3 quality and quantity remains unimpaired to the  
4 fullest extent possible. Implementation of a  
5 comprehensive water monitoring program is one  
6 very important tool that the Department of  
7 Environment and other regulators have to  
8 understand the effects of this undertaking on  
9 the environment, and to insure the protection of  
10 water quality.

11 The applicant has indicated  
12 that they will implement the water monitoring  
13 program that they have proposed. We  
14 respectfully submit that the applicant could  
15 also cease implementation of the program, or it  
16 could forget or neglect to forward data,  
17 obtained in the program, to the Yukon  
18 Government. None of these options are  
19 acceptable, and they can be avoided by  
20 prescribing a comprehensive water quality  
21 monitoring program in the licence.

22 Finally, the issue of  
23 security. The Yukon undertook to have an  
24 estimate of the cost to abandon the undertaking,  
25 restore the site of the undertaking, and  
26 implement any ongoing measures that may remain

1           to be taken after the abandonment of the  
2           undertaking. It is an estimate. It is an  
3           estimate that was prepared once it became  
4           apparent that the applicant was not going to  
5           submit similar information, in support of its  
6           application for a licence, prior to the hearing.

7                           We are pleased that the  
8           applicant has stepped up to the plate and  
9           accepted that security should be posted. This  
10          said, the late submission of details on the  
11          costing makes it difficult for us to thoroughly  
12          review and digest their cost estimates.

13                           In this context, we think it  
14          is important to note two things: first, the cost  
15          to abandon the undertaking, and restore the  
16          site, does not simply mean the cost to remove or  
17          otherwise decommission the impoundment  
18          structure, for example, but also the costs  
19          associated with work that must be undertaken to  
20          properly initiate abandonment and restoration.  
21          Such as any studies that must be undertaken to  
22          determine the most appropriate abandonment and  
23          restoration methodologies, or water treatment,  
24          that must be done in order to drain the tailings  
25          pond.

26                           In addition, we would also

1 submit that, because abandonment and restoration  
2 does not occur overnight, the total cost to  
3 abandon the undertaking, and restore the site,  
4 should include consideration of the cost to  
5 maintain the site as abandonment and restoration  
6 activities are underway.

7 The second point to be noted  
8 is that, although little time has been devoted  
9 at this hearing to the previous licence held by  
10 Ketza River Holdings, it is a matter of public  
11 record that this past licence expired in 1998.  
12 It is also a matter of public record that the  
13 applicant took no action to renew its previous  
14 licence, or obtain a new licence, until  
15 requested to do so by the Yukon Government.

16 It is our view that the mine  
17 site received relatively little, if any,  
18 attention from the applicant during the period  
19 of 1999 until 2004. And while we are  
20 encouraged by the action taken by the applicant  
21 in the last two years, at the mine site, to  
22 address a variety of environmental concerns, and  
23 we are hopeful that these initiatives will  
24 continue well into the future, past actions  
25 suggest to us that it would be in the public  
26 interest to insure that conservation and a

1 cautious approach is taken in determining the  
2 appropriate level of security to be furnished.

3 In our submission, such an  
4 approach would support a security level within  
5 the \$4.5 million range.

6 With respect to the timing of  
7 furnishing this security, the Yukon does not  
8 agree that posting of security should be tied,  
9 in any way, to the applicant submitting an  
10 application, or not, for a Type A Water Licence  
11 for production purposes. It is a simple truth  
12 that upwards of 18 months can pass, from the  
13 time an application is submitted to the Board,  
14 and a licence issued. It is also conceivable  
15 that an application, submitted, can be withdrawn  
16 before a licence is issued.

17 It is our submission that the  
18 security should be furnished and maintained,  
19 with the Minister of Environment, as soon as  
20 practicable, following issuance and approval of  
21 the requested licence.

22 Should Ketza River Holdings  
23 proceed to make a positive production decision,  
24 and Yukon Government is hopeful that this will  
25 come to pass, a new series of very separate  
26 licensing and security discussions will be

1 required. It is our view that this request for  
2 a licence should not be mixed up, in any way,  
3 with these future plans.

4 This ends my closing  
5 comments, and I thank the Board for your  
6 attention to our views.

7 MR. WILLIS: Closing remarks from  
8 Environment Canada.

9 **ENVIRONMENT CANADA CLOSING SUBMISSION**

10 MR. SOPROVICH: Thank you, Mr. Chairman.  
11 Firstly, I would just like to, if I may, just  
12 clear up a response to Mr. Johnson yesterday,  
13 with respect to a question he had about item 4  
14 in our benthic invertebrate monitoring program,  
15 which is an appendix to the brief, and this is  
16 germane to that particular one.

17 Mr. Johnson had questioned me  
18 about why we would have two sets of samples for  
19 a benthic invertebrate monitoring program with  
20 respect to the water quality sampling. And this  
21 was my error in terms of pulling together things  
22 late at night. But part 4 came out of the Faro  
23 licence, actually, where the benthic program,  
24 there, has a long history of establishing  
25 baskets in the creek with artificial substrate,  
26 and so you leave them in the creek and you

1 sample at beginning and end of the program.  
2 Whereas this particular program, that's  
3 suggested in the examples, really has one point  
4 sampling.

5 And on to our closing  
6 remarks... there are presently 324,000 tonnes of  
7 tailings, containing 4% arsenic by weight, at  
8 Ketz River Mine. Testing by ourselves, and  
9 testing by mine environment consultants employed  
10 by previous site managers, has demonstrated that  
11 you can derive between 20 and 40 ppm arsenic out  
12 of these tailings.

13 The company has stated in  
14 their application that, by exposing  
15 oxyhydroxides to oxygen, they should become more  
16 stable. We haven't been able to confirm that  
17 suggestion in literature. In fact, the  
18 scientific research, which we have consulted  
19 with, suggests the opposite, at least for the  
20 calcium iron arsenates, which make up a large  
21 part of the arsenic mineralogy in the tailings,  
22 and which are expected to predominate arsenic  
23 release from the tailings for many years, after  
24 which time other arsenics in the tailings are  
25 expected to play a more significant role in  
26 terms of arsenic release.

1                   We hope it's the case that,  
2                   with time, these tailings could stabilize, but  
3                   we haven't seen that evidence yet.

4                   The company points to their  
5                   summer experience of lowering the tailings pond,  
6                   and noticing the concentration of arsenic in the  
7                   pond water, as evidence of there being little or  
8                   no risk of arsenic release from the tailings.  
9                   Yet they seem to discount, or ignore, for the  
10                  purposes of this presentation, the inputs of  
11                  clean water to the pond, in terms of rainfall,  
12                  seepage from subsidiary diversion or other  
13                  sources, potential underground groundwater -- or  
14                  upgradient, rather, groundwater inputs to the  
15                  pond, and possibly other sources.

16                  How is it that we can add all  
17                  these other sources of clean water to the  
18                  tailings pond, yet the tailings water does not  
19                  seem to get clean?

20                  One of the driving forces  
21                  that play in the tailings is the pull of  
22                  gravity. While the lowering of the tailings  
23                  pond could result with a component of tailings  
24                  pore water flowing laterally to the pond, it  
25                  seems that the predominant direction for this  
26                  pore water is still down, in the direction of

1           the earth's gravitational pull. Certainly,  
2           there are other complicating factors at play  
3           here, and other forces at play, that are pulling  
4           on that water, and telling that water where it  
5           may want to go. But, certainly, any groundwater  
6           flow diagram I have seen of the tailings pond  
7           area suggests that the pore water should  
8           predominantly flow down, to the underlying  
9           aquifer and outwash soils, to daylight  
10          downgradient of the dam. There may be a  
11          component of flow which is more deep-seated, we  
12          don't know.

13                           We have highlighted the  
14          presence of increased arsenic, in the 4 to 5 ppm  
15          range, in groundwater from a couple of  
16          groundwater wells located in the dam, as  
17          indicative of breakthrough. The company's  
18          consultant has also noted they have observed  
19          this elevated arsenic as well, and aren't sure  
20          what to make of it yet. But they are having  
21          their hydro-geologists look at this issue, and  
22          perhaps, when that task is done, their hydro-  
23          geologist can talk to our hydro-geologist, to  
24          see what common understanding we may reach on  
25          this matter.

26                           We're still a bit unsure of

1           what to make of the bumpy crenulated line  
2           indicating arsenic concentrations for one of the  
3           two seepages, which reported more distant from  
4           the dam. And this seepage receives inflow  
5           components from various sources.

6                           The suggestion was that there  
7           may be a trend of reduced arsenic reporting to  
8           seepage, due to the pumping activities.  
9           However, there was still uncertainty for what  
10          could be a trend, perhaps influenced by  
11          increased flow from other sources, such as Cache  
12          Creek diversion, reporting to that site and,  
13          therefore, thereby further diluting the dam  
14          seepage; or, this may be indicative of a  
15          seasonal trend that has not been noticed before,  
16          because there hasn't been someone on site, for  
17          a number of years, sampling the seep, and at  
18          this frequency.

19                          Complicating this further is  
20          the discovery that the applicant measures flows,  
21          at the seeps, using a bucket flow method. We  
22          consider this method to perhaps be accurate to  
23          plus or minus 30% accuracy. You just don't see  
24          the Water Survey of Canada using a bucket to  
25          measure flow. The only buckets they have, they  
26          carry instruments in. Especially if a weir's

1 available.

2 Unfortunately, we just don't  
3 have the full complement of data to help us  
4 interpret some of this information which is  
5 presented by the applicant here, so uncertainty  
6 does remain.

7 All this is to say that we  
8 don't feel the company has adequately presented  
9 the case that there is marginal risk from this  
10 site, from current activities. We just don't  
11 see the supporting data; not yet.

12 Our studies and  
13 investigations have lead us to the understanding  
14 that there are risks attached to the site. We  
15 know that there is arsenic in mine wastes on  
16 site. We understand that arsenic to be mobile.  
17 We agree that arsenic is reporting to  
18 groundwater, at some locations, at elevated  
19 concentrations, at levels between 4 and 5 part  
20 per million arsenic, for samples from well P-  
21 12b, for instance. And while this increased  
22 arsenic may be attenuated, with reduction or  
23 removal of some of the arsenic in the underlying  
24 soils for awhile, that capacity is not infinite.

25 We wish to see the high risk  
26 issues dealt with, with development of a closure

1 plan, one that encompasses as much of the site  
2 as reasonably possible, and in a manner which is  
3 fully defensible and available for review by  
4 experts, including experts in the regulatory  
5 sphere.

6 The tailings is one component  
7 in need of this type of address. There may be  
8 other components of the site for which the  
9 company no longer has a future interest.

10 Now, the company has  
11 suggested there may be few fish in Cache Creek.  
12 And we have heard, at this forum, from members  
13 of Ross River Dena Council, their use of Cache  
14 Creek. We have also heard, in this forum, that  
15 perhaps the early fisheries studies could have  
16 received more effort; that more fish should be  
17 expected to be present in this system.

18 Regardless of the number of  
19 fish, it is our department's mandate to protect  
20 all life stages of fish, plus the organisms  
21 which are important to their long-term survival  
22 in a healthy aquatic ecosystem. The objective,  
23 from our standpoint, for whatever activity may  
24 occur on this site, is protection of Cache  
25 Creek, and protection of Ketz River, the  
26 receiving environments.

1 Thank you.

2 MR. WILLIS: Ross River Dena Council.

3 **ROSS RIVER DENA COUNCIL CLOSING SUBMISSION**

4 MR. SMITH: I'll just read out what our  
5 Chief has written here. He had to leave for  
6 other commitments.

7 Thank you. We appreciated  
8 that our concern's voiced by all intervenors at  
9 this hearing. The process very well scrutinized  
10 the necessary obligation as to obtain a care and  
11 maintenance licence.

12 Ross River Dena Council  
13 reiterate Testloa's comments, yesterday, in  
14 relation to subsistence harvest that was ongoing  
15 for generation upon generation, within the area  
16 of activities previously and now. It's our  
17 custom and belief always to respect the land we  
18 live on, and to honour it. It connects us to  
19 our very life. We need to continue in  
20 respecting that way of utilizing the land.

21 Ketza River Holdings has done  
22 a lot of cleanup within the area of our  
23 concerns, and continue to consult with us in the  
24 various stages.

25 Thank you for voicing our  
26 concerns. My time here was very much

1 appreciated.

2 And, for myself, likewise, in  
3 closing, I think we also want to go over some of  
4 our concerns and add to our closing remarks by  
5 Pat, and I'll let him to continue our closing  
6 remarks.

7 MR. WILLIS: Thank you.

8 MR. TOBLER: The First Nation supports the  
9 idea of making the development of a  
10 decommissioning plan as a stipulation of the  
11 water licence. The First Nation also would like  
12 to see a design for the toe berm, and it's the  
13 First Nation's opinion that that should be  
14 completed soon.

15 In terms of water quality,  
16 water quality is important to the aquatic life  
17 and the First Nation. We don't feel comfortable  
18 recommending a number; however, if the  
19 applicant's proposed discharge standards for  
20 arsenic is granted, and they take the approach  
21 of using water quality objectives downstream,  
22 the First Nation sees the need for weekly water  
23 sampling at KR-8 and KR-12, during discharge  
24 events. And that is related to -- or, KR-8 is  
25 obviously Cache Creek, and KR-12 is the Ketzka  
26 River downstream of Cache Creek.



1           limited to abandonment of the undertaking, the  
2           restoration of the site of the undertaking, and  
3           then any ongoing measures after the abandonment  
4           of the undertaking. And we don't believe it's  
5           appropriate for care and maintenance costs to be  
6           subject to security.

7                           I'm going to let Mr. Polyck  
8           continue.

9           MR. POLYCK:           Thank you, Rod. First of  
10           all, we'd like to thank the Board and the staff  
11           and the intervenors for the time and effort, and  
12           their concerns expressed. It shows the  
13           democratic process in action.

14                           As part of the care and  
15           maintenance program, Ketza River Holdings  
16           Limited has submitted a water use application,  
17           with water quality monitoring plans which we  
18           feel are quite rigorous compared to the scope of  
19           this application; that is, to pump seepage back  
20           to the tailings pond, discharge treated water  
21           from the tailings pond. No mining or other  
22           human activity is occurring to adversely impact  
23           the water quality, no waste is being added prior  
24           to discharge of treated water, and the company  
25           will be improving the water quality emanating  
26           from the site for the last 16 years.



1           the water before returning it to the  
2           environment. In other words, Ketz River  
3           Holdings will be improving the situation as  
4           exists, as stated earlier.

5                       We wish the licence to  
6           reflect part of the care and maintenance program  
7           Ketz River Holdings has for this site, as we  
8           have described.

9                       We did not submit a plan to  
10          abandon the site because we believed it to be  
11          premature. We did not expect to provide  
12          security at this point in time. However, we  
13          will be submitting a decommissioning plan as  
14          required, and provide security as prescribed by  
15          the Board.

16                      We can give positive  
17          assurance that we will not be abandoning the  
18          site. The site has a potential for a long life,  
19          in terms of mining, and we believe environmental  
20          protection to be paramount, not just part of the  
21          operation.

22                      Ketz River Holdings is  
23          working closely with the Ross River Dena Council  
24          in joint stewardship, partnership, in ventures  
25          concerning the site, and environmental  
26          protection. Our commitment to Ross River is

1 well-known, and includes preferred economic  
2 opportunities, training of site monitoring,  
3 including environmental monitoring and  
4 surveillance at and about the site.

5 None of the intervenors were  
6 opposed to the licence for the project, and each  
7 expressed their concerns and recommendations.

8 Finally, we request that the  
9 Board issue a licence consistent with the scope  
10 of the project.

11 Thank you very much.

12 MR. WILLIS: Thank you. On behalf of the  
13 Board and our Board staff, we thank you for  
14 having participated in, I think, a good hearing.  
15 We're going to adjourn, now, pending our further  
16 deliberations.

17 (Proceedings concluded at 3:05 p.m., April 13,  
18 2007)

19 This is to certify that the  
20 foregoing is a true and faithful  
21 transcript of the contents of the  
22 record prepared in the above named  
23 proceeding.  
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Doug Ayers, Court Reporter