

1 A BRUCE OTT: Bruce Ott, AMEC.

2 Thanks for the question, Martha, it is a good one.

3 I certainly brushed over that in my brief

4 presentation. We would expect a minimum of five

5 years of relatively intensive monitoring following

6 operation. That might need to be extended if there

7 is some issues or liabilities that arise during the

8 operation.

9 MARTHA AKOLUK: Okay. Thank you.

10 CHAIRMAN: Okay. Are there any

11 other questions from the floor? Ramli?

12 ACRES INTERNATIONAL QUESTIONS LICENSEE:

13 Q RAMLI HALIM: Thank you, Mr.

14 Chairman. Ramli Halim from Acres International.

15 The first question is I was wondering if Tahera can

16 help me clarify the mine life, I think one

17 mentioned about eight years, and some of the graphs

18 mentioned nine years.

19 A GREG MISSAL: Greg Missal with

20 Tahera Corporation. Ramli, essentially we are

21 defining the mine life as eight years. I think in

22 some of the graphs they happened to include a year

23 of construction, so essentially one year of

24 construction, eight years of mine life is what you

25 see when you see something that might seem like it

26 is a nine-year mine life.

1 Q RAMLI HALIM: Okay. Mr. Chairman,  
2 the next two questions actually related to the  
3 divider dike. I understand that Tahera is planning  
4 to have a final design on the divider dike, and I  
5 have seen on some of the slide, the new slides that  
6 Tahera presented yesterday, and they have  
7 additional information about the divider dike.

8 The first question about the divider dike is  
9 related to the critical and the importance of this  
10 dike itself. During the life or during the  
11 operation of the mine, the west dam basically is a  
12 critical dam because it is containing the tailings  
13 water. However, after the mine is ceased  
14 operation, the tailings itself, the one that is  
15 located on the eastern portion of the dike became  
16 an important part because it will be left intact,  
17 and the divider dike, it will become part of the  
18 tailing dams that will be left over after the mine  
19 operations is completed.

20 My question is actually we just want to find  
21 out if in terms of the construction of the divider  
22 dike, whether the divider dike will be constructed  
23 in a dry or it is -- I noticed that it is made of  
24 rock fills other than just water and what kind of  
25 foundation preparation, and is there any problem  
26 with the talik condition? Because there will be

1 water on one side, on both sides before eventually  
2 it is going to be all freezed out, and I was  
3 wondering if this is going to be included as part  
4 of the design of the divider dike with all the  
5 stability analysis built on it.

6 A CAM SCOTT: Cam Scott, SRK.  
7 Ramli, a lot of those questions were addressed  
8 somewhat in a memorandum which we prepared  
9 following the technical meetings in late October.  
10 In essence, what the memo indicated was it provided  
11 effectively the design criteria for the divider  
12 dike in terms of its objectives, provided a  
13 preliminary design insofar as the main body of the  
14 structure and the zoning and transition and so on.

15 We acknowledge that there is some information  
16 yet to be gathered insofar as foundation  
17 conditions. The current expectation was that there  
18 would be some work over the course of this winter  
19 in terms of probing through the ice to get a handle  
20 on -- a better indication of the foundation  
21 conditions there, and as well as studies later,  
22 subsequently over the first phase of rock placement  
23 will likely be done over this coming summer,  
24 through the wet, as a first phase, waste rock only.  
25 And during that period of time, we would gather  
26 more information on the foundation. And as other

1 materials become available to -- like coarse  
2 processed kimberlite and some waste rock, to get a  
3 better handle on those properties with a view to  
4 defining the actual design details on the filter  
5 and the transition.

6 So, again, more work to be done, a schedule  
7 has been prepared, and a program of investigation  
8 has been prepared. Does that answer your question?

9 Q RAMLI HALIM: Mr. Chairman, yes, I  
10 think.

11 VICE-CHAIRMAN: Please state your name  
12 before you speak.

13 Q RAMLI HALIM: Ramli Halim, Acres  
14 International.

15 The second question is again about the  
16 divider dike. The crest on the drawing, probably  
17 that's the drawing that you have, it mentioned  
18 initially at elevation 520, and I just want to find  
19 out that during the life of the pond, the PKCA,  
20 what's the chances that actually the water level,  
21 particularly during a flood, that is going to raise  
22 above that and whether the divider dike will be  
23 designed to allow some kind of overflow?

24 A CAM SCOTT: Cam Scott. The  
25 intention is to have sufficient free board to be  
26 able to accommodate issues such as floods. There

1 will be effectively a swale or a means of overflow  
2 over the top of the structure as well to deal with  
3 those short-term infrequent events.

4 But the expectation is as the beach rises and  
5 -- the divider dike will be raised as well over  
6 time. The current thinking is the first phase  
7 would take it to approximately 517 this coming here  
8 and be raised accordingly, depending on what  
9 happens on the tailings -- or the fine processed  
10 kimberlite deposition.

11 RAMLI HALIM: Mr. Chairman, Ramli  
12 Halim, Acres International. I don't have any  
13 further questions at this time. Thank you.

14 CHAIRMAN: Thank you. Are there  
15 any questions from Environment Canada to be  
16 addressed to the applicant?

17 ENVIRONMENT CANADA QUESTIONS THE LICENSEE:

18 Q ANNE WILSON: Good morning, it is  
19 Anne Wilson with Environment Canada. Thank you.

20 A question on the regulation versus  
21 monitoring of nitrate. In the previous submissions  
22 that had been proposed to have a regulatory limit,  
23 and I'm sorry if I missed this last evening, but I  
24 see now it is just for monitoring. Can I have just  
25 some understanding of why that would be changed?

26 A GREG MISSAL: Greg Missal with Tahera. I

1 apologize, Anne, if I didn't say that clearly or  
2 correctly, but it was nitrate that we are saying  
3 monitoring and nitrite that we would like  
4 regulated. Does that help?

5 Q ANNE WILSON: Anne Wilson. No, I  
6 was clear that it is nitrate that you are proposing  
7 to monitor, and I thought initially that was  
8 proposed for regulatory limits.

9 A KELLY SEXSMITH: Kelly Sexsmith. The  
10 proposed criteria that we laid out in the  
11 documentation was intended to come up with criteria  
12 for all the parameters that have -- various parties  
13 have expressed interest over the process of the  
14 NIRB hearing and the water license submission.  
15 They do not necessarily represent parameters that  
16 we feel should be regulated at the site, they  
17 merely present limits that could be used if the  
18 Nunavut Water Board chose to regulate them.

19 In the case of nitrate, the issues -- it has  
20 not been included in any other water license except  
21 for Snap Lake, and in the case of Snap Lake, again,  
22 they have a small lake with very little dilution  
23 and potential for algal blooms there which they are  
24 trying to prevent by having a nitrate limit. We  
25 don't feel that is as critical at this site, so  
26 that's why we suggest that it is included as a

1 monitoring-only parameter.

2 Q ANNE WILSON: Anne Wilson,  
3 Environment Canada. I would like to just make a  
4 point of clarification. On the Snap Lake license,  
5 it was a toxicity issue, not an enrichment or  
6 eutrophication issue. What we did do to make  
7 recommendation on that license limit was to look at  
8 the most sensitive native species. We did not use  
9 the tree frog that was in the CCME guidelines as a  
10 criteria, and came up with a number that would be  
11 protective from chronic toxicity and acute toxicity  
12 within Snap Lake as the nitrate will build up over  
13 time there. So I believe the renewal of the Ekati  
14 license will also have nitrate regulated, so I  
15 think we are seeing a trend that way.

16 Anne Wilson, Environment Canada. And I will  
17 apologize in advance if this was covered last  
18 night. For the release of effluent from the  
19 tailings containment area into Stream C3, I  
20 understand that the flow levels will be between the  
21 5 and 10-year maximums and that Tahera has  
22 undertaken to monitor closely for any erosion which  
23 may occur.

24 The question that is in my mind is what  
25 contingency will be in place for immediate response  
26 if erosion is observed, because often once it

1 starts, it will be -- it will snowball a little  
2 bit, thermoerosion will lead to further erosion  
3 even if the discharge is stopped. Will there be  
4 materials onsite and equipment ready to install  
5 whatever mitigation is needed?

6 A PETER McCREATH: Pete McCreath,  
7 Clearwater Consultants for Tahera. The plan, Anne,  
8 is that the C3 stream would be inspected prior to  
9 any releases occurring from it. So it would be a  
10 comprehensive walk over and inspection looking for  
11 potentially weak areas, erodible areas, if those  
12 were discovered.

13 And I don't know if you have seen the stream  
14 itself, but it is somewhat hard to find sometimes.  
15 Weak areas would be reinforced with clean gravel,  
16 for example, or clean granite as riprap to prevent  
17 erosion.

18 The peak flows that you referred to would be  
19 for a contingency time of release. If there was  
20 the need to store water for a couple of years  
21 within the PKCA and then release two years' worth  
22 of water in a single season, then in that case, the  
23 average monthly releases over the peak month would  
24 approximate something like the five to ten-year  
25 return period flow in a natural stream, an event  
26 which has obviously occurred a number of times in



1 the natural channels, so it is not an extremely  
2 rare occurrence.

3 During discharges, there would also be  
4 monitoring going on to make sure that there was not  
5 ongoing erosion, and if there was, there would be  
6 the remedial measures that would be put in place  
7 would be to put in erosion-protection material as  
8 required.

9 ANNE WILSON: Thank you, that's all  
10 my questions.

11 CHAIRMAN: Thank you. Any  
12 questions from DFO to be addressed to the  
13 applicant?

14 DFO QUESTIONS THE LICENSEE:

15 Q DERRIK MOGGY: Derrik Moggy with  
16 Fisheries and Oceans. A couple of questions I had,  
17 with respect to the C1 diversion channel, I was  
18 wondering if you could elaborate a little bit more  
19 on what the changes were that you were referring to  
20 in your presentation?

21 A RICK PATTENDEN: Rick Pattenden. The  
22 original design of the diversion channel called for  
23 no fish-friendly features, essentially a conduit to  
24 pass water. That has since been changed. The new  
25 features are the fish-friendly section, Reach C3.  
26 And within Reach C3, we have a defined channel that

1 will have the ability to contain standing water  
2 during low flow, which fish can use. In addition,  
3 there will be ripple pool sequences built in to  
4 that fish-friendly channel. These are the new  
5 features since the original design.

6 The specific redesign aspects are detailed  
7 designs of the pool ripple complexes which have  
8 been presented to DFO. And an additional redesign  
9 or adjustment would be a narrowing of the  
10 dissipation pond number 2 to address a potential  
11 issue of permafrost. That redesign has not been  
12 submitted to DFO for review, but Cam Scott may want  
13 to comment on his confidence in being able to  
14 provide that design to DFO.

15 CAM SCOTT: Cam Scott, SRK. Yeah,  
16 what you see now -- what you have seen now, Derrik,  
17 very much reflects what we can say at this time,  
18 and a lot of the details will be developed as we  
19 spend time in the field over the next construction  
20 season and moving into the actual construction of  
21 the diversion itself.

22 Q DERRIK MOGGY: Okay. Thank you. The  
23 other question I had was with respect to the fish  
24 salvage program which you used a protocol that has  
25 been developed by DFO to more or less be designed  
26 specifically for Long Lake. Has there been any

1 further discussion, I guess, with some of the local  
2 communities on the implementation of that fish  
3 salvage program and possibly the end use of the  
4 fish?

5 A GREG MISSAL: Greg Missal with  
6 Tahera. We haven't formally done that yet, Derrik,  
7 but the intent is to, through the KIA initially, I  
8 guess, ask them their opinion on which group might  
9 be the most appropriate to be involved in a project  
10 like that. I suspect that it is probably one of the  
11 HTOs or HTAs in one of the communities, and of  
12 course we would seek KIA's advice on that, and that  
13 would be the route that we follow on that program  
14 for getting the local input on the project.

15 DERRIK MOGGY: Thank you. No further  
16 questions.

17 CHAIRMAN: Thank you. Are there  
18 any questions from NTI to be addressed to the  
19 applicant? Thank you. Are there any questions  
20 from KIA to be addressed to the applicant?

21 MR. DONIHEE: No sir.

22 CHAIRMAN: Thank you. Are there  
23 any questions from the Hamlet of Kugluktuk to be  
24 addressed to the applicant? Are there any  
25 questions from the Nunavut Water Board to be  
26 addressed to the applicant?

1 WATER BOARD STAFF QUESTIONS THE LICENSEE:

2 Q DIONNE FILIATRAULT: Thank you, Mr.  
3 Chairman. My name is Dionne Filiatrault. The  
4 Court Reporter knows my name, and most people know  
5 my name.

6 Just based on the actual presentation that  
7 you gave, I will start there, it is the most recent  
8 information that summarizes your overall  
9 submission. Could you clarify the predevelopment  
10 baseline work that may not be accounted for in the  
11 application?

12 What I'm looking for is there was a lot of  
13 additional baseline work that was required, and I'm  
14 looking more towards water quality or impacts to  
15 water that may have been requested following the  
16 NIRB project certificate, a commitment that would  
17 have been made by Tahera and the work would have  
18 been done, say, following the submission of this  
19 application in August.

20 Has any work been done this summer that is  
21 not represented in here or that has been taking  
22 place up to now?

23 A BRUCE OTT: The work that was --  
24 sorry, Bruce Ott, AMEC. Dionne, to answer your  
25 question, the work that was done this summer which  
26 I alluded to was the aquatic effects monitoring

1 program, the detailed summary monitoring which also  
2 included a collection of -- another collection of  
3 sediment which was requested by Environment Canada.

4 The one thing that I can think of that's  
5 outstanding with respect to the request from  
6 Environment Canada and commitments by Tahera is  
7 late winter oxygen levels. We applied for a permit  
8 under NRI to do the work up there. Unfortunately,  
9 it -- in October last year, unfortunately it wasn't  
10 issued until June, and by then it wasn't really  
11 representative conditions at that time.

12 Q DIONNE FILIATRAULT: Thank you, Mr. Chair.  
13 I'm aware of the one outstanding issue of dissolved  
14 oxygen. Has discussion taken place with  
15 Environment Canada as to the frequency and proposed  
16 submission or reporting of that information either  
17 back to Environment Canada, or do you plan to  
18 provide that information to the Board? And if so,  
19 when?

20 A BRUCE OTT: Bruce Ott, AMEC. We  
21 had one note about a month or so ago from  
22 Environment Canada with respect to when the aquatic  
23 effects monitoring program might be available,  
24 specifically the sediments. What we left with  
25 Environment Canada was that the sediment report  
26 probably could be supplied in advance of all of the

1 aquatic effects monitoring program, but since it  
2 was really an integral part of it, we would prefer  
3 to submit everything as an integral report. I  
4 personally have had no further correspondence with  
5 Environment Canada with respect to that particular  
6 issue.

7 A RICK PATTENDEN: Rick Pattenden. The  
8 outstanding components of the monitoring program  
9 for 2005 are in the process of being analyzed and  
10 presented. We didn't envision completion until  
11 sometime in January, so that report wouldn't be  
12 available to the Board at this time.

13 Q DIONNE FILIATRAULT: Thank you, Mr.  
14 Chairman. This is in relation to the PKCA, when  
15 you were talking about the divider dike. There  
16 seems to be some confusion within the documentation  
17 as to when that divider dike construction, when it  
18 is proposed to start, and I just want to get the  
19 final if it is available, when you foresee the  
20 earliest that this would be constructed?

21 A CAM SCOTT: Cam Scott, SRK. Yeah,  
22 Dionne, the details as outlined in that memorandum  
23 that was issued in, I believe, mid-November is the  
24 current thinking. It fits more tightly with the  
25 schedule and the construction plans for Tahera, and  
26 specifically the first stage, the waste rock

1 component to elevation 517, which is about two or  
2 three metres above the lake level, would occur this  
3 coming summer, the 2005, subject to permit, of  
4 course.

5 The other elements in terms of the filters  
6 and the transition zones on the upstream face would  
7 be installed in conjunction with later on and,  
8 again, subject to further testing and information,  
9 but prior to the deposition of pump fine PK within  
10 the cell.

11 Q DIONNE FILIATRAULT: Thank you, Mr.  
12 Chairman. Along that same line, I guess I am just  
13 trying to understand how the actual construction  
14 takes place. If there is -- is there water on the  
15 upstream face of that divider dike when those  
16 variation transitional layers are put into place  
17 that Don referred to in his presentation?

18 A CAM SCOTT: Cam Scott, SRK  
19 Consulting. The initial placement of the waste  
20 rock would occur in the wet during the summer. My  
21 understanding, and correct me if I am wrong here,  
22 is that the actual dewatering of Long Lake to some  
23 practical limit would occur over the late summer  
24 and fall, in which case essentially the current  
25 location of the divider -- the location of the  
26 divider dike is in approximately one or two metres

1 of water.

2 So, in other words, shortly after the -- or  
3 some period of time after the dewatering starts,  
4 there will be effectively a dry zone on the  
5 upstream face and on the downstream face, for that  
6 matter, either side of the dike, so that the  
7 subsequent placement of the actual transition and  
8 filter zones would occur in the dry.

9 Q DIONNE FILIATRAULT: Thank you, Mr.  
10 Chairman. In the presentation that Don Hayley  
11 gave, he talked about fill times, he evaluated the  
12 long-term temperature effects and related it, I  
13 believe, to typical values that were determined at  
14 Ekati in '95. I'm just wondering if the water in  
15 the PKCA is to be drawn down for construction, how  
16 long is the fill time expected on the upstream face  
17 of the west dam for this particular project?

18 A CAM SCOTT: Cam Scott, SRK  
19 Consulting. I think in practical terms, Dionne,  
20 the water level will rise fairly slowly just  
21 because most of the water coming in will be from  
22 construction, and a lot of the sources that have  
23 been assumed for modeling won't be contributing  
24 water, such as from the various ponds, and so on,  
25 associated with waste-rock piles.

26 For modelling purposes, essentially what has



1       been assumed is that the water level is quite high  
2       very early on, which is essentially what one would  
3       assume under normal circumstances for design  
4       modelling.

5   Q   DIONNE FILIATRAULT:                    Hi, it is Dionne. I  
6       have been told. Thank you, Mr. Chairman. There  
7       was some reference in the documentation that when  
8       you draw down the water on the upstream face of the  
9       west dam, there is also going to be a low spot  
10      where there is another dike that is referenced, and  
11      I am just wondering if you could speak a little bit  
12      about this internal dike that is going to be  
13      generated almost between the divider dike and the  
14      west dam. I'm not really clear on what that is all  
15      about.

16   A   CAM SCOTT:                            Cam Scott, SRK  
17       Consulting. Current plans don't indicate that we  
18       would construct something, another structure,  
19       between the divider lake and the west dam. There  
20       is some reference in the text that depending on  
21       water quality and settlement of suspended solids,  
22       there is something that could be constructed,  
23       again, to facilitate the process of getting rid of  
24       the solids -- suspended solids in the water. And,  
25       again, that just touches on the slide that Mr.  
26       Hayley had last night which basically showed the

1 difference between the water on either side of the  
2 divider dike at Ekati.

3 So, in other words, if you are not getting  
4 full satisfaction from the initial divider dike,  
5 there is that latitude to put something in later.  
6 It is not something that is committed to at this  
7 statement, it is just a statement of what could  
8 occur.

9 Q DIONNE FILIATRAULT: Thank you,  
10 Mr. Chairman. Just a verification, in the  
11 modelling that was done for the dilution, and this  
12 refers to the presentation that Kelly Sexsmith  
13 gave, was the control lake to the southwest of --  
14 or south of Lake C3 considered as far as an effect  
15 on the overall dilution modelling that was done?

16 A KELLY SEXSMITH: I believe -- it is  
17 Kelly Sexsmith. The Jericho River flows through  
18 that control lake into Lake C3, is that correct,  
19 Bruce?

20 BRUCE OTT: Yes.

21 A KELLY SEXSMITH: So there is a constant  
22 gradient of flow into Lake C3 from that direction.  
23 So in that respect, the influence of the control  
24 lake on Lake C3 is included just as a simple flow.

25 There is no time that the flow could reverse  
26 its correction, so that was not considered.

1 Q DIONNE FILIATRAULT: Thank you, Mr.  
2 Chairman. This refers to the monitoring of the  
3 site and the presentation by Bruce. It seems that  
4 in the overall water quality monitoring or even  
5 sediment monitoring for the site, that there has  
6 been no consideration, other than toward Ash Lake,  
7 Lynne Lake and in relation to the winter road,  
8 there has been no consideration of monitoring south  
9 or southwest of Long Lake, and I'm just wondering  
10 what your thoughts are on that and why there has  
11 been no consideration from water monitoring south  
12 and southwest?

13 A BRUCE OTT: Bruce Ott, AMEC.  
14 Lynne Lake is proposed. As we have indicated,  
15 there is no -- there will be no direct discharge to  
16 that water system. In fact, and, Mr. Scott may be  
17 able to discuss this a bit further, the waste rock  
18 and the waste handling facilities won't approach  
19 that area of the divide for some time after mining  
20 begins. Thus, the only possible effects on that  
21 system would be from airborne -- say from blasting,  
22 if nitrate or ammonia were carried over into  
23 that -- over into that system. We feel that the  
24 one monitoring station in Lynne Lake will -- would  
25 adequately predict any effects that the mine might  
26 have on that lake system.

1 Q DIONNE FILIATRAULT: That addresses more  
2 the southeast area of the project. I'm worried  
3 about the southwest area of the project, Mr.  
4 Chairman, in relation to any potential airborne  
5 particulate that is being generated through the  
6 deposit of fine PK in the PKCA, and it being  
7 deposited south of the project depending on  
8 predominate winds or whatnot, so I am just  
9 wondering if that was thoroughly thought out.

10 A BRUCE OTT: Bruce Ott, AMEC. I'm  
11 not quite sure, if we are talking Long Lake and we  
12 are talking southwest, which lakes that you might  
13 be talking about? There is one that I know that is  
14 almost due west, might be a little southwest of  
15 Long Lake, but not -- I'm not aware of any other  
16 water bodies in that area, so I must not understand  
17 what you are asking.

18 Q DIONNE FILIATRAULT: That's fine, Mr.  
19 Chairman, I will go to my next question.

20 In relation to the presentation that was  
21 provided by Court Smith in reference to the  
22 reclamation and cost estimate assumptions and site  
23 assumptions, they indicated that the surface  
24 facilities such as the camp office complex, mine  
25 shop are Nunavut owned and operated, and this  
26 brings into my mind an administrative issue or

1 potential administrative issue is that is the  
2 Nunavut Water Board required to licence in any  
3 other way these facilities? They obviously are not  
4 owned and operated by Tahera. Nuna has indicated  
5 that they will be owned and operated by Nuna.

6 You know, at this point we would need a  
7 detail of what facilities exactly that includes and  
8 exact water and waste requirements and/or locations  
9 to water and waste. And if at this point Tahera  
10 doesn't have that information, when will they have  
11 it to be able to provide it to the Board?

12 GREG MISSAL: Mr. Chairman, I would  
13 like to ask Court Smith to respond to that  
14 question.

15 A COURT SMITH: Mr. Chair, Court  
16 Smith. During the final reclamation, it is  
17 necessary to bring in a temporary camp to be able  
18 to demobilize the final aspects. Is that what you  
19 are referring to?

20 Q DIONNE FILIATRAULT: No, it referred to --  
21 and I can actually probably give you the slide  
22 reference in your presentation, if I can actually  
23 find it now. Here it is. Nuna logistics, it is  
24 probably about your, I don't know, 17th slide where  
25 you refer to site assumptions, and I'm just looking  
26 for clarification on what those facilities are and