

NUNAVUT WATER BOARD

BENACHEE RESOURCES INC. WATER LICENSE APPLICATION

DECEMBER 7, 2004

VOLUME 3

LOCATION: KUGLUKTUK COMMUNITY COMPLEX

KUGLUKTUK, NUNAVUT

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1 (TRANSCRIPT CONTINUED FROM VOLUME 2)

2 Q DIONNE FILIATRAULT: Mr. Chairman, I know
3 that Thomas isn't here. He is going to provide a
4 clarification to the question I asked regarding the
5 flow, and if it's okay with you, I can pull Thomas
6 aside and clarify it with him at the next break, if
7 you want to wait, or if you want to proceed.

8 And just to let you know, the staff -- I'm
9 finished with my questions, once we get
10 clarification on the toxicity and the flow, and the
11 guys have probably about seven questions.

12 VICE-CHAIRMAN: If I can, Mr.
13 Chairman, what we are discussing here is that
14 Thomas is not here, and we don't know where he is.
15 He may have gone for lunch. Your clarification and
16 question is okay, but I'm concerned about the rest
17 of the questions, too, that we are going to have to
18 have -- want to ask. We want to finish all the
19 questions before lunch, and if Thomas is not here,
20 we can't go any further, it is just not fair to
21 him, so Mr. Tilleman maybe?

22 BILL TILLEMANN: Well. Mr. Chairman, it
23 is 12 o'clock or 5 to 12, so perhaps with that in
24 mind, the Board could -- you could give
25 instructions on when you want to break and when you
26 want to come back.

1 CHAIRMAN: Are there any further
2 questions? Pardon me. I believe there was a
3 clarification to be made. Thank you.

4 PETER McCREATH: Thank you, Mr. Chair,
5 Pete McCreath, Clearwater Consultants. I would
6 just like to point out that I was prepared to
7 answer the question, and I was not responsible for
8 setting the fire alarm off.

9 Dionne, you were talking about the releases
10 from the PKCA and pacing the releases with the
11 natural hydrographs. That refers to the
12 operational phase when excess water is being
13 released from the system on an annual basis to
14 maintain the water balance, and those releases
15 would be adjusted on a basis to coincide as much as
16 possible with what the natural hydrographs in the
17 creek and in the receiving waters, Lake C3 and the
18 Jericho River, would be.

19 During dewatering, if it is required, that
20 would be carried out pretty much on a sustained
21 basis so that the flows on a sustained basis would
22 be typical to the average freshet flows that
23 carried on for a slightly longer period of time.

24 Q DIONNE FILIATRAULT: That's fine, Mr.
25 Chairman. I am just wondering if Tahera's
26 clarification on the acute toxicity issue that

1 arose?

2 A GREG MISSAL: Mr. Chair, Greg Missal
3 with Tahera. Dionne, we need to make one quick
4 phone call to a consultant that is not here just so
5 we are providing the correct answer, so we will do
6 that. Hopefully we can reach him over lunch hour
7 here, and then we will be able to respond to that
8 when we come back. Thanks.

9 CHAIRMAN: Okay. I would suggest
10 now that we take an hour break. We will be back
11 here at 1 o'clock sharp. Thank you.

12 (RECESSED AT 12:00 P.M.)

13 (RECONVENED AT 1:06 P.M.)

14 CHAIRMAN: Welcome back. Just a
15 reminder to Elders, people in the community, any
16 time when you wish to speak, if you wish to give
17 your statement or your concern, you are welcome to
18 say anything when you want to say. We are here in
19 your community, don't be embarrassed if there is
20 any questions or concerns from people of Kugluktuk.

21 Thank you. Okay. Let's carry on there. Are
22 there any further questions from the start of the
23 Water Board?

24 Q DIONNE FILIATRAULT: Mr. Chairman, just
25 quickly I am wondering if Greg has had an
26 opportunity to get the clarification object on the

1 toxicity information before Steve and Dave start?

2 A BRUCE OTT: Bruce Ott, AMEC. Mr.
3 Chair, yes, we have. The microtox test, which is
4 the one under question, I believe, was suggested as
5 a rapid screening test, not as a regulatory
6 instrument, so it would be used to provide an early
7 and rapid indication whether there was a problem
8 with the discharge, at which point samples would be
9 taken and submitted to an accredited toxicity lab,
10 and those results used as a regulatory instrument.

11 There is a few issues here, one is that this
12 test would be conducted at the mine, not at an
13 accredited toxicity lab. The people would be
14 trained to operate the toxicity test, but by no
15 means would they be qualified toxicologists.

16 There is no regulatory precedent that we are
17 aware of for using a microtox screening test as a
18 regulatory instrument. It is certainly -- the
19 MMER, for instance, is silent on the use of that
20 test. There is no consistent agreement in the
21 scientific body out there as to whether there is a
22 relationship that's understood between a microtox
23 test and actual environmental effect. There is
24 also the issue of sometimes false positives or
25 false failures on the microtox test, and we submit
26 that using that as a regulatory instrument would

1 produce an unfair regulatory and financial burden
2 on the mine operating under those circumstances.

3 CHAIRMAN: Okay. Any other
4 questions there?

5 Q DIONNE FILIATRAULT: Mr. Chairman, just a
6 follow-up. I'm still not -- like, I understand
7 that you are going to use microtox. Can you
8 clarify for me that after the 48 acute toxicity
9 test has been done, if the results yield a
10 positive, meaning that it is going to be toxic,
11 after you reassess the volume in the mixing zone,
12 that you will not be discharging if it is still
13 showing a positive toxic result?

14 A Bruce Ott, AMEC. I'm a little confused about
15 the -- and I wasn't the author of that memo,
16 unfortunately. There is two tissues here, I think,
17 mixing zone dilution, I believe, refers to chronic
18 toxicity. And the issue with a microtox, of
19 course, refers to acute toxicity, so we may be
20 talking about different things altogether.

21 If there is a 96 hour LD 50 or a daphnia --
22 48-hour daphnia test that shows acute toxicity, the
23 mine, I would expect, would be required to cease
24 discharge until that was sorted out and the
25 effluent was no longer acutely toxic.

26 My understanding for chronic toxicity is that

1 that is used as an instrument for regulating or for
2 adaptive management and changing either the rate of
3 flow or looking at contingency for the discharge,
4 rather than as a regulatory instrument.

5 DIONNE FILIATRAULT: Thank you,
6 Mr. Chairman, that's fine.

7 CHAIRMAN: Any further questions?

8 Q DAVE HOHNSTEIN: Yes, thanks,
9 Mr. Chairman, Dave Hohnstein. Just a little more
10 clarification on Lake C3. We heard earlier that
11 the control lake was an input to Lake C3, and I was
12 wondering if there was any other major inputs to
13 that lake?

14 A BRUCE OTT: Bruce Ott, AMEC.
15 Again, Mr. Chair, the simple answer is no, there is
16 a few small streams that flow in, but they are very
17 small.

18 Q DAVE HOHNSTEIN: Okay. Thank you.
19 Dave Hohnstein again. Just a follow-up to that
20 response, then, was there any consideration given
21 to using the feed input from the control lake as a
22 gauging station for adjusting flow from Long Lake
23 rather than the output of Lake C3?

24 A Bruce Ott, AMEC again. Just from being on the
25 site, Mr. Chair, it is -- if you put any sort of
26 gauging station in either the inlet or the outlet

1 streams to Stream C3, we suggest it is doomed to
2 failure.

3 We established a staff gauge in 1999 with
4 some great difficulty, and probably more risk than
5 we ought to have taken near just below the peak of
6 freshet in the outflow stream. It is extremely
7 rocky, there is large boulders there that are two
8 or three or four metres across and smaller
9 boulders. It is extremely difficult to get an
10 accurate discharge measurement by measuring across
11 the creek. You can't use a boat in there or a
12 cable because the stream is running too fast and
13 there is too many big boulders.

14 The upstream side is very similar, that's why
15 we have suggested -- I think based on the
16 experience of AMEC's senior hydrologist with the
17 Melliadine project over towards Baker Lake of using
18 lake levels as a measure of the flow-through, we
19 feel that that's practical and that's doable, and
20 it has been demonstrated in other sites, and trying
21 to measure the flow in the stream is something that
22 isn't going to work.

23 Q DAVE HOHNSTEIN: Dave Hohnstein again.
24 On another topic, there has been a number of
25 references in the documentation to the fine PK
26 being encouraged to be deposited above water and in

1 subaerial deposition. I was wondering what kind of
2 consideration was put into the possibility of
3 wind-blown tailings or wind-blown fine PK exiting
4 the containment area, how controls are being looked
5 at, or what controls are being looked at?

6 A CAM SCOTT: Cam Scott, SRK. There
7 is an awareness of that possibility. We think that
8 during the summer months that if the disposal of
9 the slurry from the pipelines on the dikes is done
10 in a fashion that promotes moisture over the entire
11 surface of the PK on a regular basis, we shouldn't
12 have too much issue during the summer months.

13 There is no question that you can get
14 freeze-drying in the winter and perhaps for a lot
15 of mines that is probably the most difficult time
16 of year with respect to dusting. I think if it
17 becomes a problem, one has the latitude of
18 potentially discharging the water to promote the
19 development of ice, and you still have sublimation
20 working for you, but I believe there are
21 operational issues that we can implement if indeed
22 it becomes a problem.

23 Q STEPHEN LINES: Thank you, Mr.
24 Chairman. Stephen Lines, Nunavut Water Board. My
25 first question is what volume of water are you
26 requesting for construction, and what volume of

1 water you are requesting for operation? And do you
2 feel that the Board should differentiate between
3 the two?

4 A GREG MISSAL: Mr. Chair, Greg
5 Missal, Tahera Corporation. We are requesting
6 500,000 cubic metres per year, and we don't believe
7 it should be any different for the construction
8 phase.

9 Q STEPHEN LINES: Thank you. Stephen
10 Lines again. Do you feel that there is a need or
11 has consideration been given for some kind of
12 stability monitoring of the divider dike?

13 A CAM SCOTT: Cam Scott, SRK. The
14 divider dike is essentially an internal structure,
15 so given that one looks at the balance of materials
16 on either side of it, we don't feel it is a
17 necessary element for operations.

18 Q STEPHEN LINES: Thank you. At what
19 point will the ponds A, B and C be constructed?

20 A MR. McCREATH: Pete McCreath,
21 Clearwater Consultants. At the moment there is no
22 specific date set for the construction of these
23 ponds. As we have described, we will be monitoring
24 runoff and seepage from the various site facility
25 areas. Initially, that will be directed to the pit
26 for transfer into the PK.

1 We expect runoff to be very low in the early
2 years, certainly from the waste dumps because of
3 freezeback into the dumps. So the decision to
4 construct the ponds will be deferred and would
5 depend on such things as both water quality from
6 the local runoff area and the quantity of runoff
7 that is experienced from the areas.

8 Q STEPHEN LINES: Thank you. Stephen
9 Lines again. This question stems from something
10 that I heard at one of the other diamond mines in
11 the Northwest Territories that was a bit of a
12 problem, and that was water coming into the open
13 pit via the kimberlite pipe at the bottom, and I'm
14 wondering if this is something that's been
15 considered?

16 A DAN JOHNSON: Dan Johnson with
17 Tahera. Being a land-based kimberlite, it is in
18 continuous permafrost, all of our planned mining
19 activities, and so therefore the kimberlite itself
20 is frozen, unlike the other diamond mines.

21 Q STEPHEN LINES: Thank you. Stephen
22 Lines again. In the Tahera presentation, it was
23 said that there was 485,000 cubic metres as
24 proposed to be let go from the PKCA annually, and
25 I'm just wondering, and I think this relates a
26 little bit to what Dionne was asking before, what

1 is the current natural flow volume over that same
2 period per year?

3 A MR. McCREATH: Pete McCreath,
4 Clearwater. Can you give me a couple of minutes to
5 run the numbers up for you in terms of the volume
6 comparisons?

7 Q STEPHEN LINES: Sure.

8 CHAIRMAN: Are there any more
9 questions? Steve?

10 Q STEPHEN LINES: In the presentation,
11 as well, it was mentioned that there would be nine
12 lichen monitoring stations, and that data would be
13 collected every three years from these stations.
14 And I'm wondering if that would provide sufficient
15 data when developing a detailed reclamation plan?

16 A BRUCE OTT: Bruce Ott, AMEC. I'm
17 going to need some clarification. Lichen
18 monitoring stations don't really have anything to
19 do with reclamation but have to do with air
20 quality, so perhaps you could clarify what your
21 question is?

22 Q STEPHEN LINES: It was regarding the
23 deposition of metals. So if you were using the
24 lichen to monitor metal deposition, and maybe it
25 would have to also do with the soil monitoring, but
26 regardless, would taking data from those nine

1 stations every three years provide you with
2 sufficient data to analyze?

3 A BRUCE OTT: Yes. Pardon me, Bruce
4 Ott, AMEC. We consider that the program is every
5 bit as robust, and perhaps more so considering the
6 scale of the mine, than what's carried on at Ekati
7 and Ekati's program. Our understanding, anyway, is
8 that it is judged to be adequate for the purpose.

9 Q STEPHEN LINES: Thank you. My last
10 question, regarding the monitoring results, I am
11 just wondering if there would be a plan or an idea
12 that maybe you could provide on how some of the
13 local residents in the communities, and especially
14 those that live within the boundaries of that
15 watershed, can be provided the results of the
16 monitoring that is ongoing throughout operation and
17 through closure? Thank you.

18 A GREG MISSAL: Mr. Chair, Greg Missal
19 with Tahera. Steve, I guess would you be referring
20 to the reports that might be distributed to other
21 regulatory bodies? Would it be those same reports?

22 Q STEPHEN LINES: Yeah, I guess it would
23 be the reports, but beyond that. For example, when
24 you have a mine such as Ekati or Diavik, I know
25 they do community visits to explain those reports
26 to the communities. And numerous times when I was

1 here, Kugluktuk was one of those points because it
2 is the end of the Coppermine River, so I'm just
3 thinking especially for people of Bathurst, for
4 example, they are on the outflow, how would they
5 know?

6 A GREG MISSAL: Mr. Chair, Greg
7 Missal, Tahera Corporation. Certainly part of our
8 plan going forward is to continue with the
9 community consultations in the communities. And
10 Bathurst Inlet, we have been there before a number
11 of times, and we would certainly return to Bathurst
12 Inlet. And during those visits, would certainly
13 give appropriate opportunities to discuss these
14 types of items.

15 STEPHEN LINES: Thank you, Mr. Chair.

16 A PETER McCREATH: Thank you, Mr. Chair,
17 Steve, just in response to your question about the
18 relative volumes. The average release that we are
19 talking about, the 485,000 cubic metres derives
20 from the assumption of coarse runoff from all the
21 site facilities being directed to the PKCA. We
22 feel that is a conservative number because of
23 various assumptions which I believe we talked about
24 at the technical meetings.

25 Stream C3, in the area of Long Lake, the
26 average annual volume of flow is in the order of

1 100,000 cubic metres. And at Lake C3, it is
2 ability 180,000 cubic metres on an average annual
3 basis. Estimated numbers obviously because we
4 haven't had a gauge, of course, at the mouth.

5 STEPHEN LINES: Steve Lines again,
6 thank you very much. I believe Dave had one more
7 question.

8 Q DAVE HOHNSTEIN: Thank you, Mr. Chair.
9 Dave Hohnstein. Just a follow-up to Stephen's
10 question on the request for water use for
11 construction period versus operational. We have
12 got in our information here that the design
13 parameter was about 40 cubic metres per hour, which
14 works out to roughly 350,000 cubic metres per year.
15 And it was also stated that the predicted water use
16 would be somewhere between 170,000 and 260,000
17 cubic metres per year.

18 We were just discussing here, we are
19 wondering where in the application the change was
20 made to the 500,000 cubic metres per year that you
21 had just mentioned in answering Stephen's question?

22 A MR. MISSAL: Greg Missal, Tahera
23 Corporation. You are correct, Dave, those are our
24 estimated amounts for water use. I think it is
25 important for us to have a little bit of extra
26 there because there is probably going to be from

1 time to time, perhaps, extra need, and obviously we
2 wouldn't want to have to come back to the Water
3 Board for a slight increase in that amount. So
4 those are estimated numbers, and our request to you
5 is for up to 500,000 cubic metres.

6 Q DAVE HOHNSTEIN: Thank you, Mr. Chair.
7 Yes, I guess the question was is it in the current
8 application requesting 500,000 cubic metres. We
9 weren't aware of it, and we need to work with some
10 numbers.

11 A GREG MISSAL: Mr. Chair, Greg
12 Missal, Tahera Corporation. I think that number
13 that we put in, it is a water-use request, whereas
14 the 500 maybe would be a regulatory maximum that we
15 might be allowed to use, but the 350 would be
16 our -- what our estimated water-use amount is.

17 DAVE HOHNSTEIN: Thank you, Mr. Chair.
18 I think we will leave that one for a few minutes
19 and maybe get back to it later. Dionne has got a
20 question.

21 Q DIONNE FILIATRAULT: In the original
22 application that was filed by Benachee Resources,
23 the quantity of water that will be used will be
24 approximately 35 cubic metres per hour, which works
25 to the upper bound that David gave of 262,000 per
26 year. This is the volume of water that was

1 requested in the application. The 500,000 that you
2 are now requesting, is it safe to assume that --
3 let's assume you are using your maximum design
4 parameter of 40 cubic metres per hour. That works
5 out to 350,000 would be the design expectations,
6 and that anything above that is not actually fresh
7 water that is coming from Carat Lake but
8 operational water from the site that is somehow
9 going to end up in the PKCA.

10 Does the volume that you requested at 35
11 cubic metres per hour represent the direct water
12 use that you want this Board to approve?

13 A GREG MISSAL: Sorry, Mr. Chair, Greg
14 Missal, Tahera Corporation. Again, I guess I would
15 just like to reiterate that the up to 40 cubic
16 metres is what we estimate we will need, and --
17 but, however, we would like to have a little more
18 space, just in case we would need additional
19 amount, but so we would like to have it to be up to
20 500. But perhaps I could ask if that's a
21 possibility?

22 Q DIONNE FILIATRAULT: Well, I think
23 ultimately that rests with the Board and the
24 decision that they are ultimately going to make.
25 But I guess the other issue is more of an
26 administration process issue. The application that

1 was filed and what you requested was 35, what went
2 through the overall -- the whole screening process
3 and what went through the NIRB process was the 35.

4 So I leave it to the lawyers to figure out if
5 there is an issue there or not, and maybe Bill has
6 something else he wants to add. But ultimately I
7 think that decision will rest with the Board, and
8 we know what you want. But it is just for the
9 benefit of the Board that the new value of 500,000
10 is a new number that has been tabled today, and we
11 were not aware of.

12 CHAIRMAN: Any further questions
13 from the Water Board? Kugluktuk, Elders, the
14 community people? John Donihee

15 KIA QUESTIONS THE LICENSEE:

16 Q JOHN DONIHEE: John Donihee for the
17 Kitikmeot Inuit Association. Thank you, Mr.
18 Chairman. We did pass earlier on our opportunity
19 to ask questions of the applicant, but there have
20 been a couple of things that arise as a result of
21 some of the answers given to Board staff that I
22 appreciate the opportunity to ask a question about.

23 I think perhaps I'll start first off by
24 asking Mr. Missal or through the Chair to Mr.
25 Missal and whoever he wants to direct it to. If
26 you are asking for an extra 100,000 cubic metres of

1 water, what are the environmental and engineering
2 effects of all of that? And did you calculate all
3 of that in the material that you filed with this
4 Board?

5 A DAN JOHNSON: Dan Johnson for
6 Tahera. Again, I think we estimated the 350,000
7 water use, and the 500,000 was just a -- if there
8 was going to be a restrictive cap, but we do not
9 expect to use 500, we expect 350,000 cubic metres
10 is our estimated use.

11 Q JOHN DONIHEE: John Donihee. May I
12 assume then that your analysis of the environmental
13 effects is based on 350,000 and not 500, or is it
14 based on 500?

15 A DAN JOHNSON: It is based on the
16 estimated use, 350,000.

17 Q JOHN DONIHEE: John Donihee, thank
18 you. I have another issue that I would like to
19 explore with Tahera, and I am referring to Exhibit
20 number 1 in this proceeding, it is a letter of
21 December the 3rd from Mr. Missal to Phyllis
22 Beaulieu, the manager of licensing at the Board.
23 And the letter is from Mr. Missal on Tahera
24 Corporation letterhead. It deals with the issue of
25 the relationship between Tahera Corporation and
26 Benachee, I think that's how to pronounce it,

1 Resources Inc.

2 Mr. Missal, can you tell me, are you a
3 corporate officer of Benachee Resources Inc.?

4 A GREG MISSAL: Mr. Chair, Greg Missal
5 with Tahera. No, I personally am not, John.

6 Q JOHN DONIHEE: John Donihee. Then,
7 sir, you are not able to make any commitments here
8 on behalf of Benachee Resources, are you?

9 A GREG MISSAL: Mr. Chair, Greg Missal
10 with Tahera. John, I am a corporate officer of
11 Tahera, and Benachee being a subsidiary, the
12 relationship I guess is obvious. But I would
13 reiterate I am not a corporate officer of Benachee.
14 But, however, I guess that being said, you know, we
15 have said in the past that Tahera is acting on
16 behalf of Benachee Resources Inc.

17 Q JOHN DONIHEE: John Donihee. Thank you,
18 sir. You clearly understand that they are
19 different corporate persons, or you wouldn't have
20 answered the way you just did. So I guess the
21 second part of what I am concerned about is that
22 the application is in the name of Benachee
23 Resources Inc. We have Tahera here representing
24 them, and I'm not challenging that. But if the
25 water license is issued to Benachee, you know, who
26 has got the money for the security?