MACKENZIE VALLEY ENVIRONMENTAL

IMPACT AND REVIEW BOARD

GIANT MINE REMEDIATION PROJECT

ENVIRONMENTAL ASSESSMENT HEARING

EA 0809-001

Mackenzie Valley Review Board:

Richard Edjericon	Chairperson
Danny Bayha	Member
John Curran	Member
Richard Mercredi	Member
James Wah-shee	Member
Percy Hardisty	Member
Rachel Crapeau	Member

HELD AT:

Tree of Peace

Yellowknife, NT

September 13, 2012

Day 4 of 5

1 APPEARANCES

2	Chuck Hubert	) MVEIRB Staff
3	Paul Mercredi	)
4	Simon Toogood	)
5	Shannon Hayden	)
6	Vern Christensen	)
7	Alan Ehrlich	)
8	Stacy Menzies	)
9	Cailin Makin	)
10	John Donihee	)Board counsel
11	Katherine Enns	)Technical Advisor
12	Lukas Arenson	)Technical Advisor
13	Franco Oboni	)Technical Advisor
14	Dave Tyson	)Technical Advisor
15		
16	Joanna Ankersmit	)THE DEVELOPER
17	Michael Nahir	)AANDC
18	Adrian Paradis	)
19	Katherine Silcock	)
20	Yose Cormier	)
21	Mark Palmer	)
22	Ray Case	)GNWT
23	Lisa Dyer	)GNWT ENR
24	John Hull	)Golder
25	Greg Newman	)

1 APPEARANCES (Con't)

2 Darren Kennard)Developer cont'd

3 Tony Brown)SENES

4 Bruce Halbert)

5 Michael Van Aanhout)STRATOS

6 Daryl Hockley)SRK

7

8 Henry Westermann)PWGSC

9

10 Rudy Schmidtke)AECOM

11 Bob Boone)

12

13 Heather Potter) Justice Canada

14

15 Ricki Hurst)DPRA Canada

16

17 Bill Enge (np))North Slave Metis

18 Susan Enge)Alliance

19 Eric Binion)

20 Ed Jones)

21

22 Kevin O'Reilly)Alternatives

23 Joan Kuyek (np))North

24

25

1 APPEARANCES (Con't)

2 Jeff Humble)City of
3 Gordon Van Tighem)Yellowknife
4 Dennis Kefaas)
5
6 Edward Sangris)YKDFN
7 Todd Slack)
8 Alfred Baillangeon)
9 Fred Sangris)
10 Randy Freeman)
11 Jonas Sangris)
12
13 Amy Sparks)Environment
14 Lisa Lowman)Canada
15 Margaret Fairburn (phonetic))
16 Anne Wilson (np))
17
18 Sarah Olivier)DFO
19 Rick Walbourne (np))
20 Bev Ross)
21 Morag McPherson)
22
23
24
25

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1 LIST OF EXHIBITS

1 --- Upon commencing at 9:10 a.m.

2

3 THE CHAIRPERSON: Good morning. I'd

4 like to call the public hearing to order now. It's now

5 9:10. This morning I want to start off a prayer with

6 the -- the former Chief from Dettah, Jonas Sangris. If

7 you could come up, our young Elder now in training.

8

9 (OPENING PRAYER)

10

11 THE CHAIRPERSON: Mahsi, Jonas Sangris,

12 for doing the prayer. Mahsi, mahsi. Before I start, I

13 believe there's a couple -- we have one (1) -- my legal

14 counsel will make a quick comment, and then I'm going -

15 - I believe the Developer also wants to make a comment,

16 as well.

17 So I'm going to go to legal counsel

18 first.

19 MR. JOHN DONIHEE: Thank you, Mr.

20 Chairman. John Donihee for the Review Board. A couple

21 of housekeeping items to follow up on. Last night in

22 Dettah at the public meeting -- hearing held over

23 there, ex-Chief Peter Liske provided the Review Board

24 with two (2) documents, which we've distributed to the

25 parties today.

1 And I'd like to file them on the record
2 as exhibits. The first one is a September 25th, 1973,
3 letter sent to the Minister of INAC. I -- I'm not sure
4 what it was called then, but it was to Minister
5 Chretien, Commissioner Hodgson (phonetic), Mayor Henney
6 (phonetic), and a -- a gentleman named Colin Nguyen
7 (phonetic). I don't believe there's any objections to
8 this document being filed. And it would be Exhibit 6.
9
10 --- EXHIBIT NO. 6: September 25th, 1973,
11 letter sent to the Minister
12 of INAC
13
14 MR. JOHN DONIHEE: The second document
15 that Chief Liske provided to us was an April 8th, 1999,
16 letter to the Honourable James Stewart (phonetic). And
17 I propose that we file that as Exhibit number 7.
18
19 --- EXHIBIT NO. 7: April 8th, 1999, letter to
20 the Honourable James
21 Stewart
22
23 MR. JOHN DONIHEE: I've confirmed -- I
24 -- I just -- I know that during the course of these
25 proceedings, you know, people are asked to do things,

1 and parties are asked to do things and it's good to
2 strike them off the list if we can just to make sure
3 that there aren't any loose ends when the hearing ends.
4 So I just want to confirm -- I -- I've
5 spoken with Mr. Curran this morning. There was a
6 question asked yesterday about the project --
7 proportion of the project -- total project costs
8 attributable to Baker Creek. And we were provided with
9 a 2010 estimate of that. And that -- that question has
10 been satisfied.
11 The other question that I'll -- or issue
12 that I'll refer to at this moment relates to concerns
13 about the absence of Health Canada. There were
14 questions asked to the Developers earlier in the week.
15 And yesterday there were a number of questions directed
16 at Department of Fisheries and Oceans as well about
17 this issue.
18 I understand the -- these two (2)
19 federal departments have been talking about what might
20 be possible in relation to Health Canada's -- securing
21 Health Canada's assistance. And I think the Board
22 would like to hear what the answer is about that.
23 And, as well, I think if there are
24 materials which were received from Health Canada which
25 are in the possession of either of these departments

1 and which are not on the record then I'd like to ask to
2 have them filed. So on this one (1), Mr. Chairman,
3 over to -- perhaps Mr. Paradis first and then to the
4 ladies from DFO.
5 THE CHAIRPERSON: Thank you, Mr.
6 Donihee. I want to go to the -- the Developer.
7 MR. ADRIAN PARADIS: Thank you. Adrian
8 Paradis on behalf of the project team. I was requested
9 on the first day to contact Health Canada and see if
10 they were available to participate in the hearings and
11 -- on short notice. They respectfully -- they
12 respectfully say they are unavailable at this time.
13 They are currently otherwise engaged and are unable to
14 attend.
15 Health Canada, that said, has been
16 actively involved with the review of the Developer's
17 assessment report and, I'm sure, the human health and
18 ecological risk assessment. We will -- are currently
19 collecting those -- their comments and their letters on
20 those reports and we'll file them -- file them with the
21 Review Board shortly.
22 They will continue to be involved in any
23 and all aspects that related to their mandate with --
24 in regards to health. We are currently completing a
25 detailed study of Back Bay, which includes fish tissue

1 sample, and we'll be providing those results to Health
2 Canada for their consideration and their review.
3 THE CHAIRPERSON: Thank you. Mr.
4 Donihee...?
5 MR. JOHN DONIHEE: Thank you, Mr.
6 Chairman. Mr. Paradis, I guess, with respect to the
7 materials you received from Health Canada, you said
8 you'll be filing them soon.
9 Shall we take an undertaking or are you
10 in a position to file that material before the close on
11 Friday afternoon?
12 MR. ADRIAN PARADIS: I should be able
13 to file them. Adrian Paradis on behalf of the project
14 team. We should be able to file them before the end of
15 the week. It's just a matter of getting them printed
16 and brought over. We'll do that as soon as we can get
17 someone from our army of folks behind us to get over --
18 get to a printer.
19 THE CHAIRPERSON: Okay, thank you. Mr.
20 Donihee...?
21 MR. JOHN DONIHEE: Thank you, sir.
22 John Donihee. It's just the word "should" that -- that
23 bothers me. You know, either you're going to do it or
24 you're not. We'll take an undertaking, file them any
25 time you want.

1 MR. ADRIAN PARADIS: I'll --
2 MR. JOHN DONIHEE: Is that -- is that
3 more convenient for you?
4 MR. ADRIAN PARADIS: I apologize about
5 the word "should." We will do it.
6 THE CHAIRPERSON: Mr. Paradis, and to
7 that question then, if you say you're going to do it --
8 tomorrow is Friday, are you saying you'll have that
9 information tomorrow or -- or are we going to agree to
10 an undertaking?
11 MR. ADRIAN PARADIS: I'll be very
12 specific. We will print them. We will bring them here
13 today. You should have them before the end of five
14 o'clock. And you will have them before the -- be -- by
15 five o'clock today.
16 THE CHAIRPERSON: Okay, thank you. I'm
17 going to go to Mr. Donihee.
18 MR. JOHN DONIHEE: Thank you, Mr.
19 Chairman. The retraining goes on. I -- I'm just
20 wondering then about Fisheries and Oceans Canada,
21 whether they have anything to add to the discussion
22 about Health Canada and, you know, the questions that
23 were raised by Board members with regard to the
24 different mandates and how, you know, the Board can put
25 the information, I suppose, that's available from those

1 different mandates together into a picture that might
2 give them some sense of risk in relation to consumption
3 of fish from the Baker Creek area.
4 THE CHAIRPERSON: Thank you, Mr.
5 Donihee. I'm going to go to DFO.
6 MR. BEV ROSS: Thank you, Mr. Chair.
7 Bev Ross, from Fisheries and Oceans Canada. I would
8 reiterate that it's not within our mandate -- within
9 DFO's mandate to comment on human health in relation to
10 consumption.
11 And so we've provided our comments in
12 relation to our mandate and did, as we committed to,
13 discuss with our colleagues and with the Developer --
14 or discussed with the Developer how we wanted -- how we
15 could move forward on this. And I trust the
16 Developer's comments and commitments will address the
17 concerns that were raised with the Board.
18 I hope that's satisfactory to the Board
19 for now.
20 THE CHAIRPERSON: Mr. Donihee...?
21 MR. JOHN DONIHEE: Thank you, Mr.
22 Chairman. Thank you for the answer. I guess we
23 appreciate the commitment. The same -- had the same
24 issue with the -- the commitment that I raised with
25 Paradis.

1 Are -- do you anticipate being able to
2 provide the results of those discussions to the Board
3 before the close of the hearing tomorrow, or would it
4 be more convenient for you to provide the Board with an
5 undertaking to report on those discussions and -- and
6 the results of those discussions at a later date?
7 THE CHAIRPERSON: Thank you. I'm
8 going to go to DFO.
9 MS. BEV ROSS: Could I ask the Board's
10 -- for the Board's clarification on what additional
11 information they're seeking from DFO beyond what the
12 Developer has committed to? I'm not sure I fully
13 understand what the undertaking would entail.
14 THE CHAIRPERSON: Okay. Mr.
15 Donihee...?
16 MR. JOHN DONIHEE: Thank you, sir.
17 John Donihee. It may not be anything different. It's
18 just that you've made commitments to the Board. And I
19 guess I'll ask you a question.
20 Do you think that the -- the Developer
21 is going to satisfy your commitment?
22 THE CHAIRPERSON: Thank you.
23 MS. BEV ROSS: Yes. We think what the
24 Developer has committed to would address the commitment
25 that we took on yesterday.

1 THE CHAIRPERSON: Mr. Donihee...?
2 MR. JOHN DONIHEE: Thank you, sir.
3 John Donihee. Mr. Chairman, let's leave it at that. I
4 can -- I'd like to chat with the Board members that
5 raised the issue at the next break. And we can let DFO
6 know what -- how the Board feels about where we've
7 gotten to.
8 MS. BEV ROSS: Okay. Thank you very
9 much, Mr. Chair.
10 THE CHAIRPERSON: Thank you, Mr.
11 Donihee. And I think it's a good idea because I think
12 yesterday afternoon we had a -- towards the end of the
13 day we were -- you know, we were really passionate
14 about the issue of fish and fish quality in Back Bay,
15 and so on. And there were questions. And so I think
16 it'd appropriate if we caucus a little bit later. And
17 then we'll come back and we'll put the question back to
18 you. Thank you.
19 MS. BEV ROSS: Thank you, Mr. Chair.
20 THE CHAIRPERSON: Okay, moving on.
21 MR. ADRIAN PARADIS: Mr. -- I
22 apologize, Mr. Chair.
23 THE CHAIRPERSON: Sorry. I'll go to
24 the Developer.
25 MR. ADRIAN PARADIS: Yesterday there

1 was some clarifications regarding the north diversion
2 that was requested.
3 Is this an appropriate time to speak to
4 those?
5 THE CHAIRPERSON: Absolutely Please
6 proceed.
7 MR. ADRIAN PARADIS: I'll ask Mr.
8 Hockley to speak on behalf of the Developer. Thank
9 you.
10 MR. DARYL HOCKLEY: Daryl Hockley,
11 technical advisor to the -- to the Developer. We have
12 -- we have stated several times that the diversion of
13 Baker Creek away from the site is not part of the
14 proposed project, but we haven't really explained why
15 very carefully.
16 So as having -- having been on this
17 project for so long, I sometimes feel like the project
18 historian, not -- not the -- not the engineer. And I -
19 - I'm going to try to go through some of the thinking
20 we've had over the years about this option.
21 It has been discussed many times and a
22 number of technical problems -- there's a number of
23 technical problems with it. So this -- so this is just
24 to refresh people's memory. This is the idea of taking
25 the water completely away from the site, catching it

1 before it even gets to Giant Mine, catching Baker Creek
2 even before it gets to Giant Mine and sending it
3 somewhere to the -- to the north or to the northeast.
4 So this option has been discussed many
5 times in the past. Some of the problems are, first, it
6 would take the contaminated water from upstream of the
7 mine and it would send it somewhere else.
8 The -- the water upstream of the mine,
9 before it gets to the mine already has arsenic in it.
10 That's from the -- the historical air emissions that we
11 hear the elders talk about. It's very true that in the
12 early days arsenic went into the air and went over the
13 whole region and we're seeing some of that in -- in
14 Baker Creek upstream of the mine.
15 So that water is already contaminated
16 and putting it into a different channel means we're
17 going to contaminate a different channel, a new
18 channel, and that's -- that has a lot of negatives or -
19 - or would have a number of risks that we'd have to
20 look at.
21 Second, Baker Creek where -- where the
22 channel goes through the mine site would still collect
23 water, all the water from the mine area would still go
24 into that channel. And that would be very contam --
25 very -- very contaminated water, because it's on --

1 it's only the water that comes off the -- off the site
2 itself. So we would -- we'd have a new contaminated
3 stream to the north and we'd have a -- a much lower
4 flow but still a contaminated stream on the -- on the
5 mine site itself.
6 The third reason, I did mention this one
7 (1) yesterday, is that even if we could move Baker
8 Creek somewhere else, there is still a risk of flooding
9 the mine. The mine can flood by groundwater. It can
10 flood by the local runoff alone. It -- it doesn't
11 flood as fast, of course, as if all of Baker Creek
12 comes into the mine, but it still floods. And if we're
13 talking about long-term, the difference between
14 flooding the mine in -- in one (1) week or flooding the
15 mine in one (1) year, they are both problems when we're
16 talking about a project that has to last for a very
17 long time. So it doesn't -- that doesn't solve the
18 problem. Those are the technical issues.
19 The other issue I think that's very
20 important to -- to us is we -- we go to -- over the
21 years we've heard people talk about Baker Creek the way
22 it used to be and we heard this again in -- in Dettah
23 last night, that people used to collect berries, fish,
24 that it was a good place for moose and caribou.
25 So we -- we believe it would be wrong to

1 give up on Baker Creek and then tell all future
2 generations we -- we didn't even try to fix it. We --
3 we think that once the -- the main problems with the
4 site are taken care of, the arsenic, et cetera, we
5 think there is a possibility to -- to restore Baker
6 Creek. We're not going to make it as good as -- as it
7 was, as God made it a few hundred years ago, or -- but
8 -- but we -- we can make it a lot better than it is
9 now.
10 I think another issue -- iss -- problem
11 we're having is we can't give you a complete plan.
12 Somebody -- somebody said yesterday we had fifty (50)
13 slides and none of them told us exactly how we're going
14 to restore the habitat and that's exactly correct. We
15 probably should have had one (1) slide explaining why.
16 There are two (2) -- two (2) reasons.
17 One (1) is that the science takes time. We have done
18 many studies over the years, but scientists, they're
19 not going to tell us the sediments are safe unless they
20 know the sediments are safe and they're not going to
21 tell us the fish are safe unless they know that. And
22 so many of those studies have resulted in a
23 recommendation for more studies.
24 A very comprehensive study was started
25 last year. We had a lot of input from the Fisheries --

1 DFO people. We had input from Environment Canada
2 people. We had input from all of the experts that work
3 with John Hull and -- and that is in draft report form
4 now and I think is going to be made available within
5 weeks or -- within weeks.
6 Once that science is available, then
7 there's still a hard question. We still have a hard
8 question as: How do we get -- how should we create
9 habitat that will minimize the risk of fish and people
10 being affected by any arsenic that remains?
11 That's not a question the scientists can
12 answer by themselves. So the science report won't
13 answer that question. That's a question you need the
14 scientists, you need the engineers and, most
15 importantly, you need the people who are going to use
16 that creek. They have to tell us what they're going to
17 do there. What they want to do there. Only then can
18 we -- can we start building it in a way that makes it
19 safe for the -- their uses of -- of that -- or as safe
20 as possible for their uses of the creek. So that's a
21 round of discussions that has to be had after the --
22 after the science is -- is complete.
23 So you -- you could ask now, well,
24 what's left for -- for the -- this assessment? There
25 are some things we can definitively say for the

1 assessment. The most important thing we think is that
2 for sure the arsenic loadings to Baker Creek are going
3 to get lower. Our -- our project is going to
4 significantly reduce arsenic loadings to Baker Creek.
5 We can also say that we have done the
6 risk -- risk assessments, health -- health risk
7 assessments. Colleague Bruce can talk about those.
8 They are well documented in our materials. What they
9 tell us is that people who eat fish from Back Bay --
10 some of those fish, of course, spent some time in Baker
11 Creek but people who eat only fish from -- from Back
12 Bay would get -- the arsenic they would get from those
13 fish would be one half (1/2) to one quarter (1/4) of
14 the arsenic they get from grocery store food.
15 So -- so even today the arsenic in the
16 fish in Back Bay today if -- if people ate only Back
17 Bay fish, the -- the arsenic -- right, yeah -- the
18 arsenic would be one- quarter (1/4) to one-half (1/2)
19 of what we get from the grocery store when we go to the
20 grocery store.
21 And -- and we looked at -- that includes
22 people who have a diet like mine, and then people who
23 have traditional foods diet. So, people who go to the
24 grocery store a lot; and people who don't go to the
25 grocery store very often. Even people who rely on

1 traditional foods. The arsenic from the fish would be
2 much less.
3 And again, our project is going to
4 reduce the amount of arsenic in Baker Creek, and we
5 still need to do the science but the expectation is if
6 you reduce arsenic in the creek, you're going to reduce
7 arsenic in the fish. So -- so we -- that's why we
8 think, and I -- I assume that's the basis of DFO's
9 conclusion as well, that the -- the project that we
10 have in front of you today will have a positive effect,
11 a net -- a net positive effect on these -- on all these
12 issues.
13 So I hope that helps. It's a lot of
14 history, and it's unfortunately not all written down
15 anywhere in one place. That would have been helpful.
16 But -- but it -- a lot of work has been done on this
17 over the -- over the years, that's -- that's the
18 important message, I think.
19 THE CHAIRPERSON: Thank you. I'm going
20 to go to John Curran, if you -- I believe this is the
21 follow-up to your question yesterday.
22 MR. JOHN CURRAN: Not -- not entirely
23 the answer I was hoping to hear. As we did get fairly
24 technical in there, Mr. Chairman, I'd like to look in
25 that direction of the room and see if there's anyone

1 from the Review Board staff or experts that have
2 anything to -- to add to that more -- more so than
3 myself, if -- if you'd indulge, but...
4 THE CHAIRPERSON: Yeah, please proceed.
5 We got one (1) technical advisor.
6 MR. ALAN EHRLICH: Thank you, Mr.
7 Chair. Both the Review Board staff -- it's Alan
8 Ehrlich for the Review Board staff. The Review Board
9 staff have some clarifications they'd like to seek on
10 that, and the Review Board's technical advisors.
11 We weren't planning to, because we
12 hadn't anticipated such a technical comment coming up
13 at this juncture in the hearing, but the Developer has
14 made a point of describing that there is arsenic going
15 -- entering the mine site from upstream sources, which
16 is described as likely aerial deposition, in Baker
17 Creek, so there's already arsenic coming into Baker
18 Creek.
19 Can you please describe the proportion
20 of arsenic right now that is entering Baker Creek from
21 upstream sources compared to the amount of arsenic that
22 is leaving Baker Creek below the mine site. Just so
23 that it's clear what kind of levels we're talking about
24 here.
25 THE CHAIRPERSON: Thank you, I want to

1 go to the Developer.
2 MR. ADRIAN PARADIS: Just a mo -- yes,
3 I'll ask Mr. Bruce Halbert to come up and speak.
4 Adrian Paradis, for the record.
5
6 (BRIEF PAUSE)
7
8 MR. DARYL HOCKLEY: So, Mr. Halbert has
9 the precise numbers and we -- those are in the DAR and
10 we can -- we can give you the numbers again if you
11 like. But the way I always remember it's about one-
12 third (1/3), one-third (1/3) one-third (1/3). So one
13 (1) -- one-third (1/3) of the arsenic, roughly and I'll
14 give you the precise numbers. But about one-third
15 (1/3) of it's coming from upstream of the site.
16 MR. ALAN EHRLICH: Mr. Chair -- sorry,
17 the -- so are you saying that two-thirds (2/3) is
18 coming -- is entering Baker Creek on the mine site?
19 Because you -- you described three (3) units and I only
20 asked about two (2) areas.
21 THE CHAIRPERSON: Thank you, and I'll
22 go to the Developer.
23 MR. DARYL HOCKLEY: I -- I think you
24 said, is two-thirds (2/3) entering from on the mine
25 site? Is that what you said?

1 MR. ALAN EHRLICH: I asked about two
2 (2) areas. You said one-third (1/3), one-third (1/3),
3 one-third (1/3), right?
4 MR. DARYL HOCKLEY: Oh, okay.
5 MR. ALAN EHRLICH: And I divide
6 differently. Are you saying that one -- that one-third
7 (1/3) of the concentration of -- that is in Baker Creek
8 when it leaves the mine site comes from upstream
9 sources, and two-thirds (2/3) is entering from the mine
10 site?
11 MR. DARYL HOCKLEY: Yeah, I thought it
12 was going to be easier to do thirds, but maybe -- maybe
13 it's not. But roughly one-third (1/3) is coming from
14 off the site. One-third (1/3) comes from the treatment
15 plant, and one-third (1/3) comes from runoff on to
16 site.
17 MR. ALAN EHRLICH: So what is -- to get
18 out of the proportion now, what's the amount that is
19 entering Baker Creek from the mine site?
20 THE CHAIRPERSON: I'll go back to the
21 Developer.
22 MR. DARYL HOCKLEY: I guess we should
23 just use the -- the numbers. Upstream of the mine
24 site, Baker Creek contributes 220 kilograms per year.
25 Other tributaries that come from off the mine site, but

1 enter within the mine site add another sixty-seven
2 (67). So when you add those two (2) up, that's why I -
3 - in my mind I remember what comes from off the mine
4 site is about 300 kilograms a year.
5 The treatment plant currently is about
6 two hundred and ninety (290) -- it's also about 300
7 kilograms a year. And then the other mine -- on the
8 mine site itself is 220 kilograms a year.
9 THE CHAIRPERSON: Thank you, I'll go
10 back to the Review Board staff.
11 MR. ALAN EHRLICH: Thank you, Mr.
12 Chair. Just one (1) moment, please.
13
14 (BRIEF PAUSE)
15
16 MR. ALAN EHRLICH: If it pleases the
17 Chair, what we would like to do, we do have questions
18 and clarifications about the technical information that
19 was presented by the Developer a moment ago. But
20 rather than do it impromptu outside of a questioning
21 time, we were wondering if it would be okay with the
22 Chair if we have an opportunity to caucus and raise
23 some of these questions at a later point in the
24 hearing?
25 THE CHAIRPERSON: That's exactly what I

1 was going to suggest, because we've got a agenda we've
2 got to maintain. So maybe if you could come back to it
3 a little bit later on today or tomorrow, that would be
4 fine.
5 MR. ALAN EHRLICH: Thank you, Mr.
6 Chair.
7 THE CHAIRPERSON: Mr. Curran, any
8 further questions?
9 MR. JOHN CURRAN: Can we go on with the
10 agenda?
11 THE CHAIRPERSON: Absolutely.
12 MR. JOHN CURRAN: Sounds good to me.
13 THE CHAIRPERSON: Okay. Before I
14 start, I just want -- sorry, Mr. James Wah-Shee?
15 MR. JAMES WAH-SHEE: Mr. Chairman,
16 thank you. In regards to the Baker Creek, it's a
17 little confusing, if I may say. The Developer seems to
18 have reached a conclusion regarding the human
19 consumption of fish in regards to Baker Creek.
20 Now first of all, the Developer is not
21 in the position to conclude whether the fish species
22 that has been referred to is safe for human
23 consumption; that is the perception that I get from
24 what you have just stated technically.
25 Now, the responsibility for whether fish

1 is -- is fit for human consumption, I believe, rests
2 solely with Health Canada in cooperation with the
3 Department of Fish -- Oceans and Fish -- Fisheries. So
4 I -- I find your remarks in -- in regards to whether
5 the consumption of fish would be -- pose no risk to
6 health, so I find that rather interesting that the
7 Developer has decided to take the responsibility of
8 making that -- those type of con -- of conclusion
9 without any research or studies in regards to the fish
10 that would be coming out of Baker Creek. That
11 particular study and research would normally be done by
12 Health Canada and in cooperation with DFO.
13 So I would like to -- to ask the
14 Developer for a clear explanation as to what their
15 responsibility is vis-a-vis the consumption of fish in
16 regards to human consumption.
17 THE CHAIRPERSON: Thank you, Mr. Wah-
18 shee, Board member. I'm going to go to the Developer
19 to the question.
20
21 (BRIEF PAUSE)
22
23 THE CHAIRPERSON: And I'd like to have
24 the Developer, a representative, not a consultant, to
25 speak. Thank you.

1

2 (BRIEF PAUSE)

3

4 MR. ADRIAN PARADIS: Adrian Paradis, on
5 behalf of the project team. Our responsibility is to
6 remediate and clean up the Giant Mine site to the best
7 of our ability. As part of that responsibility, we do
8 various studies to inform and create the science to
9 inform our decisions, and we do that in cooperation --
10 or in engagement with different federal agencies, as
11 well as the people.
12 Health -- we have conducted a human
13 health and ecological risk assessment which was
14 reviewed by Health Canada. And I will ask -- I'll ask
15 my technical team to try and provide some kind of
16 clarifications on those. It's well outside of my
17 depth.
18 But our -- our responsibility is here to
19 remediate the site. We do that by conducting studies.
20 And we do that by engaging with different departments
21 to seek their expert advice. And they -- they provide
22 us information to -- to the -- to the expert
23 departments as well as to the Boards, regulatory
24 agencies and the people in large.
25 Is there...

1 MR. DARYL HOCKLEY: Now, if I -- if I
2 implied that we were trying to do Health Canada's job,
3 I apologize, that wasn't my intention.
4 Our job is to give you the information
5 you need to assess the potential -- oh, I think that's
6 our job, to give you the information you need to assess
7 the potential effects; that's what human health risk
8 assessment does. It's a set of calculations.
9 But I think all the professional risk
10 assessors will tell you that when it comes to a
11 particular fish, that is Health Canada's -- Health
12 Canada is the one to ask, so.
13 THE CHAIRPERSON: Mr. James Wah-
14 shee...?
15 MR. JAMES WAH-SHEE: Thank you, Mr.
16 Chair.
17 While I -- I think the Developer should
18 be aware of what their responsibility is, with -- with
19 all due respect, with their role and in terms of the
20 limitations, that the Developer should be very clear
21 that -- first of all, before they even make that type
22 of statements in regards to giving assurance of human
23 consumption in regards to fish species in the proposed
24 development in regards to Baker Creek should be very
25 clear that the Federal department that is solely

1 responsible for doing the research, technical research,
2 should be confined to Health Canada and DFO to do a
3 complete research and analysis to make those type of
4 conclusions.
5 Because it -- it's not fair to the
6 Developer who is Aboriginal Affairs, and Aboriginal
7 Affairs do not have a responsibility for fish, and here
8 we are, you are making technical conclusions without --
9 in absence of, shall I say, that Health Canada and DFO
10 have not done studies that would conclude that fish in
11 Baker Creek is fit for human consumption.
12 And here, what we're talking about here
13 is that the restoration, or whatever, mitigation in
14 regards to what you're proposing to Baker Creek has not
15 even been completed. What -- what you're doing in this
16 particular hearing is -- is outlining your proposal in
17 regards to what you intend to do.
18 And the question is, options. That you,
19 in your own mind, have concluded that -- that the north
20 diversion is not an option. Not only that, is that
21 there has been -- it's been very clear that the
22 Yellowknife Dene wanted to work very closely with the
23 Developer in regards to methods and approaches that
24 would address their concerns in regards to future use,
25 and that includes the human consumption of fish in that

1 area.

2 However, the questions that I did raise

3 yesterday, we should be reminded as to which Federal

4 department is responsible to ascertain whether the

5 consumption of fish is fit for a human and, as I

6 understand it, Health Canada and DFO have not done any

7 research in that area.

8 And the other thing, too, is that the

9 proposed development in the Baker Creek has not even

10 been completed. So, I find it rather difficult to

11 comprehend as to how the Developer can make those type

12 of conclusions when the -- the work regarding Baker

13 Creek has not even begun, nor completed. Thank you.

14

15 (BRIEF PAUSE)

16

17 THE CHAIRPERSON: Mr. Wah-shee...?

18 MR. JAMES WAH-SHEE: So my question is

19 -- is that I would like to see the Health Canada and

20 DFO carry out their responsibilities and -- and have

21 this information available to this Board so that we can

22 address the concerns that have been raised by the

23 Yellowknives Dene concerning the consumption of fish.

24 So that is my question.

25 THE CHAIRPERSON: Thank you. I'm

1 going to go to the Developer to the question.

2

3 (BRIEF PAUSE)

4

5 THE CHAIRPERSON: I'll go back to the

6 Developer.

7 MR. ADRIAN PARADIS: Adrian Paradis on

8 behalf of the project. I think there's been a -- we

9 have not said that the fish -- the fish in Baker Creek

10 are safe to eat. We have said that fish... We have

11 said that the fish, the Bay fish, based on our risk

12 assessment that was agreed by Health Canada was safe.

13 And we do agree that further studies

14 need to be done and this work is ongoing. Health

15 Canada will review those studies as and when they are

16 available.

17 THE CHAIRPERSON: Okay. I'm going to

18 leave that there. You know, we -- we -- I guess like I

19 said the other days, you know, we -- we waited a long

20 time to come to this point and -- coming to the Giant

21 Mine remediation project and this is an EA where we

22 plan to sit down and to look and listen to what the

23 Developer has put together.

24 And our job is to do an assessment of

25 this whole thing and look at everything, evidence,

1 speakers, presentations, public concerns. And, you
2 know, we have one (1) more day left, you know, and
3 there's still issues around this.
4 So I'm going to suggest that maybe if
5 you could get your staff or some of your colleagues to
6 have a caucus with the Review Board staff a little bit
7 later on to try and iron out some of these issues,
8 because in -- if -- tomorrow at five o'clock, or four
9 o'clock, we're done and we're -- in the next week or
10 two (2) we're going to have to make a ruling.
11 And the way I see it right now is that I
12 don't know why Health Canada is not here. You know,
13 they should have been involved in this whole process.
14 And what I'm hearing is that you guys are speaking for
15 them.
16 And again, we need evidence, we need
17 facts. And I'm not seeing that -- and we've got one
18 and a half (1 1/2) days left. So I'm going to
19 encourage maybe your staff and your technical people to
20 have a caucus with our staff.
21 In the meantime we'll -- we will
22 continue on. But before I continue on, I want to
23 recognize the former MLA, and Minister, and the
24 Commissioner of the Northwest Territories, Tony Rifford
25 (phonetic). Good morning, Mr. Rifford.

1 And, also, I just want to make a -- just
2 a quick comment, as well. Yesterday I've continued to
3 raise a point of order in regards to some political
4 posturing, and I had a chance to talk to a young lady
5 this morning. And -- and I just want to let my friend
6 know that, you know, the -- the statements that I read
7 out yesterday, again, is -- is just to share what the
8 Review Board is saying.
9 And I just want to encourage you to keep
10 up the good work. And I know that this is probably
11 your first time sitting at the table, and I just want
12 to continue to, you know, move forward in -- in this
13 process. So if I made any comments to offend you
14 yesterday, I do apologize for that.
15 And I just want to make sure that --
16 that the message is clear that, you know, this is a
17 process for us to -- to listen to all evidence and it's
18 a public hearing. So when I talk about the political
19 posturing, it's something that, you know, we already
20 recognize that we all have Section 35 rights, and so
21 on. So anyways, I just want to leave that there and
22 move on. Thank you.
23 I want to go on to the agenda now, just
24 to recap where we are. What we have on Tuesday, we
25 didn't really have a chance to finish off the water

1 treatment management presentations by the parties. And
2 so this morning we're going to go and do that.
3 I'm going to ask the city to come up and
4 to do their presentation. Whereas, yesterday, they --
5 they were going to do a presentation on surface
6 remediation. They had fifteen (15) minutes and I want
7 to piggyback that one (1) with the one (1) from -- on
8 Tuesday, where we talked about water treatment and
9 management and they also had fifteen (15). So thirty
10 (30) minutes, and then we're going to go to questions.
11 Then I want to go into the North Slave Metis as well.
12 They had five (5) minutes to do that. And then we'll
13 move into the agenda after that.
14
15 POSITION PRESENTATION BY CITY OF YELLOWKNIFE - WATER
16 TREATMENT AND MANAGEMENT AND SURFACE REMEDIATION:
17 MR. DENNIS KEFALAS: Thank you, Mr.
18 Chair. I'm Dennis Kefalas. I'm the Director of Public
19 Works and Engineering for the City of Yellowknife.
20 When we first started this session
21 everyone was talking about the mandates of the Board
22 and the mandates of the Giant Mine team. Well, the
23 City of Yellowknife's mandate is to provide its -- the
24 residents within the general area of the Yellowknife
25 Bay with essential services, recreational services,

1 proper plan -- proper land planning and emergency
2 services.
3 During the discussions we've had several
4 issues regarding the water treatment and, again, the
5 diffuser. The biggest thing, I think we have the --
6 the biggest problem we have with the diffuser is,
7 first, that we were never consulted on the placement or
8 actual reasoning of why a diffuser would be required.
9 Some indication was given yesterday that
10 the City of Yellowknife fire department was actually
11 consulted in this -- this diffuser being installed in
12 cooperation or consideration with the fire department.
13 In discussions with the fire -- one (1) of the deputy
14 fire chiefs yesterday, the only thing that they were
15 ever asked is, what's the safe ice thickness for
16 pedestrian traffic across the -- across ice? Again,
17 when I asked -- started mentioning the diffuser, the
18 question they asked me, what's a diffuser?
19 During the technical sessions we were
20 asked -- I asked a line of questioning which -- to
21 determine -- our -- our whole idea is, we want to get
22 our pipeline replaced, so we want to increase the scope
23 of the project. So I asked a line of questioning
24 whether or not the water in Yellowknife Bay formed part
25 of the treatment process. During those technical

1 sessions we were informed it -- that the water in the
2 Bay did.
3 Two (2) days ago, we asked the same line
4 of questions. We were told that the water in
5 Yellowknife Bay did not form part of the treatment
6 process of the water being treated at the mine. Again,
7 this is something that's -- it's fine. It's -- it
8 actually works into the -- into why we have major
9 issues with the diffuser.
10 If that's the case, why can't the water
11 be treated to such a level that it provides zero (0)
12 impact as it enters the Bay, and what would the need be
13 for a diffuser? The real reason they need a diffuser
14 and the reason they picked that location is because --
15 and something they emphasized over and over the last
16 couple of days, it provides the best area for mixing.
17 Well, why do you need to mix the water if the water
18 entering the Bay has lev -- zero (0) to no impact?
19 Again, working for the City, we have
20 limited im -- we have limited budgets, so we have to
21 work within our means. Again, they're -- they're
22 proposing to install a pipeline at a cost of anywhere
23 by -- on the diffuser a cost of one point five (1.5) to
24 $2 million. That's money that could be better spent if
25 they came up with a better design, a simple outfall

1 located adjacent to the shoreline in the Giant Mine
2 area. This could be monitored, maintained and wouldn't
3 provide a risk to the residents of the Yellowknife Bay
4 area.
5 Again, when they say that the Fire
6 Department would be considerate and take into
7 consideration the actual installation, design, location
8 of this -- of this diffuser, I can tell you right now
9 the Fire Department never agreed to have a device
10 installed in Yellowknife Bay 1.5 kilometres from the
11 shoreline that could pose a risk to the residents
12 within the area.
13 Again, in response time, you would have
14 to think of what they would need to do to get there if
15 someone did go through the ice. First they'd have to -
16 - they'd have to arrive at the Giant Mine area and
17 actually have skidoos and trailers and sleds with them
18 to ensure that they could go out to the location and
19 retrieve the people that -- that required their --
20 their assistance.
21 So again, another issue we have is that
22 we -- it appears that no one was consulted regarding
23 this diffuser. The first thing you learn -- I've spent
24 many years working throughout the North. The first
25 thing we did as an engineer is when we entered the

1 communities we checked in with the -- the band office,
2 the community office. The second thing we did is we
3 approached all the Elders to determine what actually
4 goes on within the area.
5 This actually allowed us to create a
6 proper design that had zero to no impact on the -- on
7 the individuals within a community. Again, it appears
8 from the discussions that occurred last night, which I
9 really would like to thank the chair for encouraging us
10 to attend the sessions, it really put an emphasis on
11 how small our problems are within the city compared to
12 those that have been living in the area for -- for
13 generations and generations.
14 So one (1) thing that we would like to
15 do is encourage the -- the Board to go back to the --
16 to the proponent, to the Developer, and ask him to --
17 to redesign or come up with a better design because
18 they have no justification for actually installing the
19 diffuser given that the -- the Bay water doesn't
20 provide -- is not part of the treatment process.
21 Again, one (1) thing that came during
22 the meetings in the last couple of days was that --
23 that the effluent quality would be actually determined
24 at the water license area -- or li -- water license
25 stage, sorry. One (1) thing that they will bring in at

1 that time, during that -- that process, will be the
2 CCME guidelines which will allow -- allow them to test
3 the water 100 metres from end of pipe. And I don't
4 have a crystal ball, but I can guarantee you that's
5 what they'll be requesting.
6 As we move on, I'd like to hurry up
7 because I know we have about twenty (20) minutes, and
8 I'd like my colleague, Jeff Humble, to be able to get
9 to his land -- land issues.
10 There's a picture of Yellowknife Bay
11 again. Our biggest emphasis is the pipeline leading to
12 Yellowknife River. The reason that was installed was
13 because of Giant Mine. There's no ifs, ands or but,
14 it's because of Giant Mine.
15 We've done work earlier this year, I
16 think it was early this year, it might have been last
17 year, where we were looking at a way to reduce our
18 cost. We've been sampling the Bay water for
19 approximately eight (8) years. And we determined the
20 water in the Bay is actually a fairly good high quality
21 water and shouldn't pose a risk to the residents who
22 drink it. However, we can't guarantee that -- that
23 this water quality can be maintained. The Giant Mine
24 team can't give us any guarantees. The only guarantees
25 that we have in -- in life are death and taxes.

1 Given this, we would still encourage the
2 band -- or the Board to include the -- in the scope of
3 the work the replacement of this pipeline. Needless to
4 say, the City already has put an asset management pla -
5 - plan in place that we will end up probably --
6 probably replacing.
7 We will re -- in all eventuality,
8 replace the pipeline, because as we approached our
9 residents and gi -- showed them all the science about
10 how good a quality the Bay water was and that we would
11 install arsenic treatment within our new water
12 treatment plant that should be built and commissioned
13 for 2014.
14 However, we were surprised at the outcry
15 of, say, No, as long as Giant Mine's there, we want
16 the pipeline. Everyone that we've talked to wants the
17 pipeline. Earlier in the week, there was emphasis
18 saying that we talked to people and we're giving them
19 what they want.
20 Well, we've been talking to the people,
21 and what the people want is the pipeline. Again, it's
22 not part of the scope. And we encourage the Board to
23 make it part of the scope. And if not, like, let's --
24 let's face it, when you have a problem, who do you
25 call? Do you call the GNWT? No. Do you call the

1 Federal Government? No. You call the City of
2 Yellowknife because it's our mandate to look out for
3 our residents.
4 Again, we would encourage that the --
5 this -- that the Board include this part of the scope.
6 Let's look at the cost. It's $12 million. The
7 emphasis right now, early estimates for this project
8 are a half a billion dollars, $500 million. In all
9 reality, this will be a billion dollar project. What's
10 an extra $12 million?
11 I, myself, my family household income
12 tax bill every year is sixty-thousand dollars
13 ($60,000). I'm sure there's another hundred households
14 within this city that pay the same amount. That's $6
15 million a year. In two (2) years this hundred
16 households could pay for that pipeline.
17 Again, it's a small number. It would
18 add like 2 to 3 percent to the overall project cost.
19 Right now, at the stage they are, it's not a detailed
20 design. It's -- it's a very preliminary design. The
21 estimates should have a contingency between 20 to 30
22 percent. Again, at a -- at a half a billion dollars
23 that's a hundred (100) to $150 million. What's $12
24 million to that. It's peanuts.
25 For the city of Yellowknife, it's a huge

1 costs. Needless to say, it'll be all the taxpayers,
2 and anyone using it will be -- will have to help bear
3 that cost.
4 A short while ago when John Carter was
5 still working for the Band, he phoned me because there
6 was some -- he heard some rumour that the City of
7 Yellowknife would be decommissioning pump house number
8 2 if we did ever go to the Bay water.
9 I assured him the City of Yellowknife
10 would never decommission pump house number 2, and would
11 maintain that as long as the people in Dettah required
12 to -- to -- required it indeed to draw their water.
13 Again, the need -- reason they need to do that is
14 because they don't want to drink water from the Bay,
15 and it's -- it's something that's a long history of why
16 they won't do that.
17 So again, we would emphasize that the
18 Board would take into our consideration what we need,
19 what the residents of the City need, to ensure our
20 safety and our longevity, and -- and our health over
21 the years. Essentially that's all I have regarding
22 this matter.
23 Jeff Humble will come up here, and I'm
24 sorry if I get too passionate about this stuff but, you
25 know, it's -- the rest of us, we sit -- when we work

for the City everyone thinks it's a 9:00 to 5:00 job; well, it's not. We sit with our phones beside our -- our beds as we sleep at night. We go to meetings at night. We work. It's a twenty-four-seven (24/7) job, seven (7) days a week. We're there all the time. Even on vacation, we're there to answer questions and look out for our residents.

So I'm hoping that the mandate of the Federal government will be the same thing. We're only twenty thousand (20,000) people in our community. We want to assure this community can thrive in the future, and as such, such things like ensuring we have proper clean drinking water is -- is an essential service that we must maintain. Thank you.

(BRIEF PAUSE)

MR. JEFF HUMBLE: Thanks, Dennis, and thank you, Mr. Chair and the Board, for the opportunity to -- to speak.

I'm going to follow, I guess, with my presentation on the land use planning, and you heard some of the questioning yesterday, so I'm -- I heard some responses -- we heard some responses from the Developer, so I guess this presentation is to provide a

1 little bit further additional information on that, and
2 I hope some clarification on our understanding of what
3 -- what those responses mean.
4 The Developer, in our opinion, has
5 failed to address what has earlier been defined as
6 essential community interests, and these community
7 interests are recognized in the DAR, in their plan.
8 They are land use, visual and cultural settings,
9 socioeconomic conditions, transportation, and local
10 resources. Despite this fact, we have through the
11 technical sessions received some agreement from the
12 Developer to work with the City to create a land use
13 plan, and to undertake public consultation process to
14 further define these community interests.
15 The concepts that we arrived at based on
16 our consultation with the City we shared these
17 yesterday for the Board's information for our line of
18 questioning, and this is only a conceptual illustration
19 of -- of what a future land use -- the site might be.
20 However, we do not have a land use plan for this
21 project in place yet. There has been no public
22 consultation on this concept with the City of
23 Yellowknife, with the YKDFN, Alternatives North, or the
24 citizens in the -- in the region.
25 That being said, we do think there's

1 some opportunities to integrate this into the project
2 in the early stages so that we do not end up with the
3 remediation of the site and, essentially, being a
4 wasteland of unuseable land.
5 Just for those that are in the audience
6 here, we talk about the town site as a mixed use
7 development area. There is potential for some
8 residential development along the shoreline, nature
9 preservation areas, and some active passive recreation,
10 in addition to the industrial portions of the land site
11 that -- that are identified which will never be fully
12 remediated.
13 And this is just zooming in a little bit
14 closer. You maybe can't see very well, but we recently
15 completed a Harbour Plan study, and this is just the
16 zoomed-in concept of the -- the analysis that we've
17 done with an engineering firm to look at the
18 feasibility of establishing a permanent marina at that
19 site with the breakwater, and roughly two hundred (200)
20 slips. And this facility has been needed in
21 Yellowknife for well over a decade. We've had plans
22 for it previously, but we've never had the opportunity
23 to conclus -- conclusively state where this marina
24 should be because of the -- the end result situation of
25 the Giant Mine remediation.

1 So land use planning issues, really,
2 there's a -- there's about a half a dozen of them. We
3 have a municipal planning strategy. We want to look
4 towards implementation. We want to see something
5 practical happen. We need a plan that's integrated to
6 a transportation network. We need to answer the
7 question of the remediation to the residential standard
8 and where that will occur. We don't think that despite
9 the fact that the Bay area is deemed to be outside of
10 the scope that we can remove this from the -- from the
11 project.
12 And then there is the question of the
13 development and building permits, and of course public
14 consultation.
15 In terms of the municipal planning
16 strategy, we spent a great deal of time on all of our
17 projects, development projects, on all our long use --
18 long-term, long-range planning. We've recently com --
19 completed an award winning Smart Growth Development
20 Plan which looks fifty (50) years into the future. And
21 that process was based on several years, up to about
22 three (3) years of extensive public consultation. And
23 the land use planning on Giant Mine in our opinion
24 should be considered within the context of -- of the
25 Smart Growth Development Plan and these principles, and

1 these principles are -- deal with community
2 collaboration, fairness in equity, establishing a sense
3 of place, housing, open space, redevelopment,
4 reinvestment, development form, transportation, clean
5 energy, and regional awareness.
6 The -- the Smart Growth Development Plan
7 is a long-range overarching plan and it was interesting
8 to hear the elders speak yesterday of -- of a hundred
9 (100) years into the past and hundreds of years into
10 the future. Here we are thinking -- thinking fifty
11 (50) years, one hundred (100) years, and -- and it just
12 doesn't seem to be enough in the context of the legacy
13 that Giant Mine is going to leave us.
14 The general plan is -- is, I guess, a
15 more practical hands-on approach. It looks roughly ten
16 (10) years into the future. And we're looking in our
17 general plan to the impact of the industrial land that
18 we have on the market right now. We have Engle
19 Business District, Kam Lake, and Con Mine. We have
20 Giant Mine which is contributing roughly 851 hectares
21 of contaminated land. Con Mine, which is 383. We have
22 about 200 hectares of industrial land currently on the
23 market.
24 To give the Board an indication of how
25 much land is actually absorbed by the market in terms

1 of industrial development, in the past ten (10) years
2 we've roughly absorbed about 20 hectares.
3 The Akaitcho Dene First Nation have a
4 land withdrawal that's recognized by the Federal
5 Government. We are working closely with the YKDFN on a
6 land assembly strategy. We recognize that they have
7 significant commercial economic/socioeconomic interests
8 within the City of Yellowknife and I think it's fair to
9 say, without speaking for the YKDFN, that they would
10 certainly like to -- to have some lands within the City
11 of Yellowknife that are related to industrial
12 development.
13 But the point is, Mr. Chair, that there
14 is more than sufficient land -- industrial land within
15 the City of Yellowknife for well over a hundred (100)
16 years. And to designate the entire Giant Mine site as
17 an industrial site would, essentially, be to designate
18 it as a wasteland.
19 The -- the Developer has agreed to
20 complete the land use plan with the City. However,
21 we're conceding -- we're seeking continued commitment
22 from the Developer to ensure that the plan is
23 implemented. It's one (1) thing to say that they will
24 agree with our land use plan concept, but this plan
25 concept is not part of the plan -- of the remediation

1 plans.

2 We need to ensure that the plan that we

3 develop is integrated with the transportation network

4 and that this transportation network connects all the

5 various land use networks that the community envisions

6 for the site.

7 The proposed closure and realignment of

8 Highway 4 is only one (1) component of this long-range

9 network and we understand the health and safety risks

10 associated with the remediation, why this network was

11 put in, but there are no other networks proposed on the

12 site that would tie it to the land use strategy.

13 The City has reiterated through the

14 consultation process that remediation to the

15 residential standard is essential in creating a

16 balanced future development of the site. This has been

17 deemed to be out of scope. However, the Developer has

18 agreed to work with the City on this. The town site

19 has been historically used for this purpose. And

20 recognizing the heritage of the site and those

21 essential community interests that were identified

22 earlier, we feel that these aspects needs to be

23 incorporated into the plan.

24 In terms of the Harbour Plan, we've

25 spent, again, a number of years consulting with the

1 public. And there are previous planning reports
2 relating to the Yellowknife Harbour, the waterfront
3 that go back into the -- into the '90s and before that.
4 We've identified several sites, but Giant Mine is
5 deemed one (1) of the sensible sites to establish a
6 permanent marina.
7 It was agreed during the technical
8 sessions the Developer would work with the City to
9 explore the viability of this site as a marina in the
10 context of environmental contamination, further
11 analysis would be done. Again, the Developer has
12 deemed this area to be out of scope, yet the Bay area
13 continues to be impacted with remediation plan
14 components, including the diffuser.
15 In -- in the discussion of Baker Creek
16 and fish habitat, it seems very troubling that we can
17 draw a line and -- and say that this is completely
18 separate. We understand there needs to be boundaries
19 on the site, but there should also be some flexibility
20 in considering components of the project.
21 Here, again, is the -- is the vision for
22 this area and the establishment of breakwaters, which
23 would be required to establish a permanent marina with
24 about two hundred (200) slips, would mean that we would
25 need to disturb the lake bed. And the -- the sediment

1 contaminants that are in the lake bed, we do not know
2 the impacts of -- of what it would be if we actually
3 got into dredging and putting in a essential
4 breakwater.
5 We have asked the Developer to provide
6 clarification if we should proceed with further
7 planning, because it would be hundreds of thousands of
8 dollars even to do the engineering planning to proceed
9 with this. And we've not gotten a clear answer to say
10 "yes" or "no". And AANDC is, in addition to being the
11 Developer, the party responsible for granting access to
12 the -- to the lake bed and granting leases.
13 Mr. Chair, if I just might have a few
14 more minutes. In terms of development permits, it was
15 agreed the Developer would acquire all necessary
16 development and building permits during the technical
17 sessions. And it was agreed again yesterday that this
18 would be done. We've been very flexible, we want to
19 work with the Developer. We want to establish a
20 positive working relationship with the Developer on
21 this project. We think it's essential to making this
22 project as successful, if that's the right word, as it
23 possibly can be going forward.
24 A complete development permit, however,
25 generally incorporates all aspects of site development,

1 including grading, roadways, buildings. It's typically
2 based on a development scheme. This is legislated, and
3 it's an approved bylaw. And it typically involves
4 zoning districts. We have acquired -- we have applied
5 these requirements to other federal and territorial
6 projects in the past. But what we've experienced to
7 date with the Developer is that we -- we have needed to
8 grant piecemeal development permit applications for
9 certain aspects of the project. For example, the
10 demolition of the conveyor. Yesterday, Mr. O'Reilly
11 mentioned the -- the roaster. And here's another
12 structure that's -- I think the health and safety of
13 the residents in the area, it's probably deemed that
14 that be removed as soon as possible.
15 But from our perspective, this piecemeal
16 approval of applications really takes away the
17 responsibility of the Developer from providing an
18 integrated land use plan. And it's not how we do
19 planning in the City of Yellowknife with any other
20 Developer.
21 Under the City's zoning bylaws it's
22 legilated -- it's legislated that all proposed
23 developments will submit completed plans, which
24 incorporate a performance bond to ensure that work
25 proposed in the plan is completed. And, Mr. Chair and

1 the Board, a performance bond is not a bond on the en -
2 - entire aspects of all construction of the project,
3 but it is related to critical components of interest to
4 the City of Yellowknife and residents, things like
5 landscaping and trails and transportation networks and
6 recreational amenities.
7 From our -- from our very conservative
8 estimates, we -- we estimate this to be in the range of
9 about 50 to $30 million. And, Mr. Chair we -- we are
10 unable to determine what this figure is because we do
11 not have a complete land use plan in place. We do not
12 have a development scheme in place. We have not
13 consulted with the residents, with YKDFN, with any
14 other interested party to actually narrow this figure
15 down.
16 Yesterday, however, Mr. Chair, the --
17 the Developer did agree to -- to following our
18 legislation, including the performance bond when that
19 issue was raised.
20 Here are two (2) projects. One (1) is
21 the GNWT Building, and the other is the -- the Federal
22 Greenstone Building. Both of these projects, these are
23 examples, went through the proper City process. And
24 while they are very small in scale, relatively
25 speaking, being 20 to $30 million compared to this

1 project, they still follow our process.
2 Finally, Mr. Chair, in terms of public
3 consultation, yesterday was the first time that I felt
4 there was authentic engagement with the public in terms
5 of the socioeconomic interests and impacts, and -- and
6 particularly in -- in the community of Dettah.
7 Only now are -- are some of the issues
8 starting to come to surface of what the long-term
9 impacts and legacy of this project is going to be.
10 This City -- the Developer has agreed to work with the
11 City on a public consultation process for a land use
12 plan. And the City envisions this process to be in the
13 form of a multi-day community design charrette
14 involving key stakeholders, residents and
15 professionals.
16 The purpose of this consultation would
17 be to explore the proposed land use plan concept
18 because, as I said, it's not a concept. It's not yet a
19 plan. It hasn't been endorsed by the Developer. And
20 we don't feel that the public has had any input on
21 that. And -- and, Mr. Chair, from there, we think that
22 we could actually finalize a land use plan concept.
23 So in conclusion and summary, we feel
24 that today AANDC has not demonstrated authentic public
25 engagement or a proper planning process on the real

1 issues regarding the community interests.
2 The Developer has committed to working
3 with the City to create a land use plan and form a
4 public engagement process. However, there is no
5 approved plan and -- and, therefore, no financial
6 commitment to implementation of the plan.
7 The Developer is legislated and has
8 previously agreed to adhere to the municipal bylaws
9 regarding development permits. Before a Giant Mine
10 remediation plan proceeds, the Developer and the City
11 should agree on a formal land use plan based on public
12 consultation, municipal bylaws and plans.
13 And here we are, at the public hearing
14 and the final stages, and we're really looking to the
15 Board for their wisdom to help guide us on how we can
16 make this reality. A performance bond is one (1)
17 opportunity where we think that can provide a guarantee
18 that the land use plan would be implemented through a
19 public -- proper public consultation process.
20 And it's not money that's being taken
21 from the Developer, it's money that's held in a trust
22 to ensure that the components of the land use plan,
23 which the Developer has agreed to do, will be done in
24 accordance with the remediation of the Giant Mine town
25 site. Thank you.

1 THE CHAIRPERSON: Thank you for your
2 presentation. Now that we were able to get that done,
3 I'm going to ask the Metis to come up. And they got
4 five (5) minutes to do a quick presentation, as well,
5 to -- on the water treatment and management. So you
6 got five (5) minutes.
7 And then, after that, we'll take a
8 break. And then we'll go into questions.
9
10 (BRIEF PAUSE)
11
12 THE CHAIRPERSON: Please proceed, Mr.
13 Enge.
14
15 POSITION PRESENTATION BY NSMA - WATER TREATMENT AND
16 MANAGEMENT:
17 MR. BILL ENGE: Thank you, Mr.
18 Chairman. Bill Enge, president of the North Slave
19 Metis Alliance. Thank you for the opportunity to speak
20 on the issue of water treatment and management with
21 regard to the Giant Mine remediation project.
22 Needless to say, the North Slave Metis
23 Alliance is very concerned about the Developer's
24 remediation proposal regarding water treatment as the
25 health and safety of Aboriginal and non Aboriginal

1 peoples alike in this area are at stake.
2 The North Slave Metis Alliance is very
3 concerned about what the Developer is proposing to do
4 about the 270,000 tonnes of arsenic trioxide stored
5 underground at Giant Mine. This chemical hazard has
6 been imposed on the Aboriginal peoples of this area as
7 a consequence of almost a century of gold mining
8 activities.
9 With that in mind, thousands of
10 kilograms of arsenic trioxide have been
11 anthropogenically released into the atmosphere and
12 watersheds surrounding the Yellowknife area. The
13 arsenic trioxide is inorganic, and is in lake sediments
14 far to the west and around the City of Yellowknife.
15 North Slave Metis Alliance members are
16 concerned about the following significant issues with
17 regard to water treatment and management, and the
18 impact on the water on their traditional lands.
19 1) Inadequate Crown consultation and a
20 lack of participatory community based or traditional
21 knowledge methodology in environmental management
22 decision making.
23 2) The interference with Aboriginal
24 water rights as protected by Section 14(4) and 14(5) of
25 the NWT Waters Act.

1 3) Ongoing threat to drinking water and
2 air quality to the Aboriginal and non Aboriginal
3 northern, especially those resident in the Yellowknife
4 area.
5 4) The uncertainty of perpetual care
6 and lack of regulatory binding measures on the
7 proponent.
8 5) The adverse environmental health
9 impact and financial costs associated with water
10 treatment malfunction, including anything that may
11 happen to the diffuser.
12 6) The suggested mitigation measures
13 for graying from the upper Baker Creek to the
14 Yellowknife Bay and possible bioaccumulation of arsenic
15 trioxide in larger fish species.
16 7) The thinning of ice and -- and
17 winter travel in and around the diffuser.
18 8) Failure to address toxic inorganic
19 arsenic in the plankton.
20 9) Contaminated tailings off site, off
21 the lease area.
22 10) And the failure to address potential
23 inorganic toxic arsenic in migratory birds.
24 We are of the view that the negative
25 effects on the total area of the North Slave Metis

1 people's traditional water use is much greater than
2 what the Developer has taken into consideration.
3 The North Slave Metis Alliance has
4 objected, and continues to object, to the restricted
5 scope of this environmental review as it fails to
6 consider past environmental damage, human and
7 ecological, as part of the ongoing and cumulative
8 effects of this mine.
9 It also fails to address the ongoing and
10 future costs of water supply and treatment for the City
11 of Yellowknife, and the effects on the Aboriginal and
12 non Aboriginal peoples in and around the area that use
13 the water.
14 We, therefore, recommend the following:
15 That the Developer be made to negotiate water quality
16 criteria, including closure criteria, with the Section
17 35 Aboriginal rights holders. This would be undertaken
18 in accordance with limits to an acceptable change
19 framework.
20 In addition, social, cultural, and
21 economic considerations should be considered, including
22 reasonable compensation for past and -- and present
23 alterations to the water quality.
24 Fund an independent watchdog agency with
25 the mandate to monitor community perceptions of change

1 in quality, the traditional value of water. This
2 monitoring would include the performance of traditional
3 activities using water, such as tea boiling and
4 tasting, fish netting and tasting, swimming, washing,
5 canoeing, drinking and cooking, and monitor the
6 aesthetics such as visual, olafactory, and auditory
7 perceptions, and other cultural values.
8 And finally, AANDC must accept financial
9 responsibility for ensuring the drinking water supply
10 for the City of Yellowknife is not contaminated by mine
11 waste of any type, be it effluent discharge, dust,
12 disturbed sediment, et cetera.
13 AANDC must also be required to fund
14 community training and monitoring, public reporting,
15 and water -- new treatment technologies to meet changes
16 in the water quality standards.
17 Furthermore, it -- it's very disturbing
18 to the North Slave Metis Alliance that Health Canada
19 has not undertaken a significant role in studying the
20 effects of the arsenic trioxide on human health and
21 fish health and wildlife health.
22 Lastly, the North Slave Metis Alliance
23 is not comfortable with the Developer's proposal and
24 requests that this Board recommend to the Minister of
25 AANDC that the Developer -- Developer's proposal be put

1 to a more thorough review process. In other words, we
2 would like to see an independent environmental review
3 to make sure that what is being proposed here is
4 acceptable to the peoples here.
5 Now, I would like an opportunity here to
6 allow our elder to speak. Thank you.
7 ELDER ED JONES: Ed Jones here. I'd
8 like to set the record straight. I lived on Latham
9 Island before and after the Giant Mines. We got all
10 our water from the Yellow -- Yellowknife Bay all year
11 round.
12 And also I heard this morning from
13 someone that someone at Dettah said that the Metis
14 didn't use wood for heating. Well, I can personally
15 say, and I'm willing to swear on the Bible that I
16 hauled my own wood from across the Bay where the
17 tailings spilled into Yellowknife Bay. We heated our
18 home with wood.
19 And another fact that I wish to express
20 is that prior to the '50s there were -- N'Dilo was non-
21 existent. In fact, all the people who lived on Latham
22 Island used that area as a dumping ground.
23 And another fact is I want to point out
24 how and when Dettah was established. It was
25 established by the Beaver and is from Alberta who were

warring with the Dogribs. Eventually when the fighting ceased, they mixed in with the Dogribs and Chipewyans. Therefore, they're not a true Dogrib. They are a mixture of Beaver, Dogrib, and Chipewyan. Many stories and books have been written about the history of Yellowknife and most of these authors were not here when these events took place.

I may have more to say later on. Thank you.

THE CHAIRPERSON: Thank you. We'll take a ten (10) minute break. We'll come back for questions.

MR. ED JONES: May I mention further to this that I lived on Latham Island. Thank you.

--- Upon recessing at 10:32 a.m.

--- Upon resuming at 10:53 a.m.

THE CHAIRPERSON: This morning we had two (2) presentations, one (1) from the City and one (1) from the North Slave Metis. And the one (1) from the City was one on water treatment management, and the other one (1) was on surface remediation.

I want to ask now for questions from -- I have here for both parties. So I guess I'm going to

1 go to the Developer.
2 Was -- is there any questions to the
3 City or the North Slave Metis on their presentation
4 this morning?
5
6 QUESTION PERIOD:
7 MR. MICHAEL NAHIR: Thank you, Mr.
8 Chair. Mike Nahir. We have no questions. Thank you.
9 THE CHAIRPERSON: Thank you. I'm going
10 to go to the Yellowknives Dene First Nation. Is there
11 any questions for the City and/or North Slave Metis?
12 MR. TODD SLACK: Todd Slack,
13 Yellowknives Dene. No, we have no questions.
14 THE CHAIRPERSON: Thank you.
15 Alternatives North...?
16 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
17 Kevin O'Reilly, for Alternatives North. I served on
18 City council here for nine (9) years. I'm not on
19 council anymore, but I work with both Jeff and Dennis.
20 And I want to thank them for their presentations today.
21 I think it was good. Thanks.
22 THE CHAIRPERSON: Thank you.
23 Environment Canada, questions for the City of
24 Yellowknife on their presentation and/or Slave Metis?
25 MS. AMY SPARKS: Amy Sparks,

1 Environment Canada. We have no questions at this time.
2 Thank you.
3 THE CHAIRPERSON: Okay, thank you. I'm
4 going to go to Department of Fisheries and Oceans.
5 MS. MORAG MCPHERSON: Good morning.
6 Morag McPherson, with Fisheries and Oceans. We don --
7 we don't have any comments or questions to the City on
8 this but -- but did just want to make one (1) comment.
9 That Fisheries is a member of the
10 Harbour Planning Committee that the City runs and will
11 continue to participate with the City on some of these
12 issues around development in the harbour in
13 Yellowknife. Thank you.
14 THE CHAIRPERSON: Okay, thank you. I'm
15 going to go to the Board technical advisor, maybe if --
16 advisors, staff or counsel.
17 MR. ALAN EHRLICH: Mr. Chair, it's Alan
18 Ehrlich, for the Review Board. There are no questions
19 from the Board's technical advisors, staff or legal
20 counsel.
21 THE CHAIRPERSON: Okay, thank you. I'm
22 going to go to Board member Danny Bayha.
23 MR. DANNY BAYHA: Thank you, Mr. Chair.
24 I just had a question on your first presentation on the
25 -- I wasn't very clear. You made a mention -- a

1 passing mention, I guess, on the whole thing about the
2 CCME guidelines and the diffuser, end of pipe.
3 Can you just maybe clarify that a bit,
4 please? Thank you.
5 THE CHAIRPERSON: Thank you, Mr. Bayha.
6 I'll go to the City of Yellowknife.
7 MR. DENNIS KEFALAS: CCME, several
8 years ago, tried to in -- or introducing new guidelines
9 for effluent quality and the testing. Part of the
10 definition of where you could sample for this effluent,
11 it's usually used for sewage, but it's any -- any and
12 all effluents is that you're allowed to sample 100
13 metres from end of pipe; that's how you define the end
14 of pipe.
15 So in the case of this, of the diffuser,
16 the actual end of pipe is the diffuser. So what they
17 would be allowed to do is actually sample 100 metres,
18 or one (1) football length, from the end of the
19 diffuser within the Bay. Again, this was increased --
20 well, I guess the overall impact of the project, and --
21 and again incorporate the Bay as part of the process.
22 MR. DANNY BAYHA: Thank you, Mr. Chair.
23 I have no questions. Thank you.
24 THE CHAIRPERSON: Thank you. Sorry,
25 Mr. Bayha, do you have any further questions?

1 MR. DANNY BAYHA: No.

2 THE CHAIRPERSON: Good. Thank you. I

3 think I'm going to go to North Slave Metis. Sue Enge

4 had a question for the City.

5 MS. SUSAN ENGE: Thank you, Mr. Chair.

6 Susan Enge, Metis Alliance, question for the City. We

7 noticed in your presentation this morning that the City

8 of Yellowknife feels that there has not been sort of a

9 more comprehensive approach to the Developer's land use

10 planning.

11 And may I say the same applies when it

12 comes to planning that includes the Metis in your

13 future plans of public consultation. I believe the

14 City of Yellowknife listed as part of their

15 recommendation for a fuller and more broad consultation

16 with the public.

17 I would like to put on notice to the

18 City that the North Slave Metis are indigenous Metis of

19 the North Slave region, including the City of

20 Yellowknife, and we have an Elder here sitting beside

21 me who made it very clear this morning that he is

22 probably one (1) of the original inhabitants of Latham

23 Island. That was an island that consisted of Metis

24 people only at the very beginning of the development of

25 that island, and he will speak later today about that.

1 So my question to the City is: What do
2 you intend to do to ensure that Metis interests, and
3 indigenous interests of the Metis are included in any
4 public consultation that you have regarding the Giant
5 Mine remediation plan? Thank you.
6 THE CHAIRPERSON: City of
7 Yellowknife...?
8 MR. JEFF HUMBLE: Jeff Humble, City of
9 Yellowknife. Thanks for the question. Most certainly
10 any consultation process that we undertake pertaining
11 to Giant Mine, we would involve all the relevant
12 stakeholders, and that includes North Slave Metis
13 Alliance.
14 So we would make efforts in this agreed
15 upon next public consultation design charrette to
16 ensure that they -- they are invited to that. Thank
17 you.
18 THE CHAIRPERSON: Okay, thank you. Is
19 there any further questions from the North Slave Metis?
20 MS. SUSAN ENGE: No further questions,
21 thank you.
22 THE CHAIRPERSON: Thank you. Before I
23 go to my Board members maybe I could ask the City: Is
24 there any questions you have on North Slave Metis
25 presentation?

1 MR. JEFF HUMBLE: No, Mr. Chair, thank
2 you.
3 THE CHAIRPERSON: Thank you. Board
4 member Rachel Crapeau...?
5 MS. RACHEL CRAPEAU: Thank you, both,
6 for your presentations. I've got no questions at the
7 moment.
8 THE CHAIRPERSON: Thank you. Board
9 member Richard Mercredi...?
10 MR. RICHARD MERCREDI: Thank you, Mr.
11 Chair. Thank you for your presentations, both parties.
12 I have no questions at this time.
13 THE CHAIRPERSON: Thank you. Board
14 member James Wah-shee...?
15 MR. JAMES WAH-SHEE: Thank you, Mr.
16 Chair. I have no questions. Thank you.
17 THE CHAIRPERSON: Thank you. Board
18 member Percy Hardisty...?
19 MR. PERCY HARDISTY: Mahsi, Mr. Chair.
20 I don't have any questions at this time.
21 THE CHAIRPERSON: Thank you. Board
22 member John Curran...?
23 MR. JOHN CURRAN: Thank you, Mr. Chair.
24 I do have a couple of questions for the City of
25 Yellowknife. First off, for Mr. Humble.

1 You mentioned that the Developer decided
2 that the waterline was out of the scope. My question
3 to you is: Have you -- you heard that my Chair -- or
4 our Chair state that the Board set the scope in 2008,
5 and you understand that it is the Board who set the
6 scope for this EA?
7 THE CHAIRPERSON: Thank you. I'm going
8 to go to the City.
9 MR. DENNIS KEFALAS: Dennis Kefalas for
10 the City of Yellowknife. Yes, we understand that it
11 was the Board that actually set the scope for the
12 project.
13 THE CHAIRPERSON: Thank you. John
14 Curran...?
15 MR. JOHN CURRAN: While we're on the
16 topic of scope, we've -- our -- our Chair has also been
17 kind enough to restate several times that remediation
18 to industrial versus residential standard is outside of
19 the scope, but that seems to be something that you've
20 wanted to discuss anyway.
21 Do you understand that that's outside
22 the scope?
23 THE CHAIRPERSON: Thank you. City of
24 Yellowknife...?
25 MR. JEFF HUMBLE: Jeff Humble, City of

1 Yellowknife. Yes, most certainly we understand that,
2 and have indicated that in our presentation, also
3 acknowledging, however, the Developer has agreed
4 previously to work with the City on a residential
5 standard even though it was outside of the scope.
6 THE CHAIRPERSON: Thank you. John
7 Curran...?
8 MR. JOHN CURRAN: Since we're outside
9 of scope, wouldn't rerouting Highway 4 give you access
10 to new lands for recreational and residential
11 development?
12 THE CHAIRPERSON: Thank you, I'll go to
13 the City.
14 MR. JEFF HUMBLE: Jeff Humble, city of
15 Yellowknife. Yes, most certainly it would, in addition
16 to some of the interests of the Akaitcho Dene First
17 Nation that have identified interests in those lands.
18 But the issue from our perspective is
19 the approximately thousand hectares of -- of land that
20 would be deemed, essentially, an industrial site that
21 would be under utilized for future development. And we
22 feel that some of that site could be -- could be better
23 utilized for all residents and community members to
24 enjoy.
25 THE CHAIRPERSON: Thank you. John

1 Curran...?

2 MR. JOHN CURRAN: You had called for

3 some fairly prompt consultation on that land use to

4 take place this year.

5 Given the -- the time scale attached to

6 this project, do you not think that perhaps we could

7 get the arsenic tucked away and then work towards

8 finalizing the -- the land use plan?

9 THE CHAIRPERSON: Thank you, I'll go to

10 the City.

11 MR. JEFF HUMBLE: Jeff Humble, City of

12 Yellowknife. We certainly understand the -- the safety

13 and -- and health issues and that's why we've been

14 working with the Developer on certain components in

15 terms of the development permit. For example, removal

16 of the conveyor. There's the roaster.

17 Certainly, health and safety is first

18 and foremost. But I guess what we're looking for is

19 some kind of a guarantee. And if it needs to occur

20 later, for example, next year or later, we again would

21 like to see some kind of a -- a performance guarantee

22 or bond in place.

23 And we don't get any indication from the

24 Developer on how they intend on submitting their

25 development permits in the future. Are they going to

1 continue to come on a piecemeal basis, one (1) building
2 here, one (1) building there? Are we going to be
3 looking at larger areas, or are we going to be looking
4 at the entire site? Because it becomes very difficult
5 to capitalize on the -- the land use redevelopment
6 opportunities unless that becomes integrated into the
7 remediation plan.
8 So we're certainly flexible, but we --
9 we haven't really been a difficult approval authority
10 at this point. We don't want to be. We want to find a
11 way that we can work forward. And if the Board can
12 provide any assistance in that manner, we would
13 certainly be open to -- to exploring that.
14 THE CHAIRPERSON: Thank you. John
15 Curran...?
16 MR. JOHN CURRAN: I'm sure all parties
17 would appreciate your patience while we deal -- or
18 while the Developer deals with the -- the urgent health
19 concerns related to this project.
20 Just one (1) final question, unless
21 there's any resulting follow-ups, Mr. Chairman. More
22 for Dennis, you talked about the water line.
23 Do you have any documents -- and far be
24 it for me to suggest that history gets rewritten
25 sometimes on the fly, but do you have any documents

1 that clearly indicate that the water line was built as
2 compensation for the City as a result of water quality
3 out of -- coming out of Giant Mine?
4 THE CHAIRPERSON: Thank you, I'll go to
5 the city.
6 MR. DENNIS KEFALAS: Thank you, Mr.
7 Chair. Dennis Kefalas with the City.
8 Yes, actually, we do have a document
9 from, I guess, what is considered Health Canada or
10 Public -- the Department of Public Health and Social
11 Services Canada, that did studies and actually
12 recommended the installation of the pipeline and
13 covered the costs associated with the installation of
14 that pipeline, to address the issues that are -- were
15 created by Giant Mine and the contamination of the Bay
16 water that we used to draw from.
17 THE CHAIRPERSON: Thank you. John
18 Curran...?
19 MR. JOHN CURRAN: I -- I guess I would
20 just ask, then, have they been filed in our system;
21 and, if not, could they be provided to the Board?
22 THE CHAIRPERSON: Thank you. The
23 City...?
24 MR. DENNIS KEFALAS: Thank you, Mr.
25 Chair. Yes, we can provide that documentation. I

1 believe I did include it to -- in our letter addressed
2 to the Board regarding our request to include the
3 pipeline as part of the scope of this project. I think
4 that was earlier this year, maybe March, or just after
5 the technical sessions. But I will find that document
6 and provide a copy to the Board.
7 THE CHAIRPERSON: Okay, if you could
8 maybe get that to us, probably today or tomorrow?
9 Okay? Mr. Curran...?
10 MR. JOHN CURRAN: Nothing further at
11 this time, Mr. Chair. Thank you.
12 THE CHAIRPERSON: Thank you, Mr.
13 Curran. Okay, I want to thank the City of Yellowknife
14 for your presentation, and the North Slave Metis this
15 morning. Thank you very much.
16 To continue on, I'm going to go into the
17 agenda for today. The Developer's presentation on
18 perpetual care, related risks, and adaptive management.
19 On the agenda, we have forty (40) minutes for this and
20 then we have questions. So if we could go ahead and
21 set it up for forty (40) minutes.
22
23 (BRIEF PAUSE)
24
25 THE CHAIRPERSON: All right. Please

1 proceed.

2

3 PRESENTATION BY THE DEVELOPER - PERPETUAL CARE, RELATED

4 RISKS AND ADAPTIVE MANAGEMENT:

5 MR. ADRIAN PARADIS: Thank you, Mr.

6 Chair. My name is Adrian Paradis. I'll be speaking to

7 the perpetual care requirements of Giant Mine. To my

8 right I have Mr. Mark Palmer of INAC who will speak to

9 the environmental management system, adaptive

10 management.

11 Mr. Palmer has thirty (30) years

12 experience in the environmental field with twenty-two

13 (22) years experience -- experience of remediation in

14 the North. He's worked in various capacities with

15 Giant Mine since 2000.

16 To Mr. Palmer's right is Mr. Michael Van

17 Aanhout. He is the Chairman of STRATOS, a value-based

18 environmental management and sustainability consu --

19 consultancy located in Ottawa and Calgary.

20 Michel is an environmental -- is an

21 environmental management and auditing expert with

22 twenty (20) years experience in government industry and

23 consulting. Over the past twelve (12) years Michael's

24 been providing strategic advice to the contaminated

25 sites management to both public and private sector

1 organizations across Canada, in the north, and
2 internationally.
3 Michael works with clients and
4 communities with interest to design, manage, and
5 facilitate engagement processes -- processes on a range
6 of sustainability issues including nuclear waste,
7 orphaned and abandoned mines.
8 He is a facilitator of the Mining
9 Association of Canada toward sustainable -- sustain --
10 sustainability of mining community of interest panel.
11 Michael graduated from the Royal Military College of
12 Canada, participated in the leadership forum at the
13 Univ -- University of Ottawa School of Management
14 Centre for Executive Education and is a registered
15 professional engineer in the Province of Alberta.
16 Beside Mr. Van Aanhout is Daryl Hockley.
17 He has been introduced to you earlier this week. He
18 has been one (1) of our senior technical advisors on
19 the Giant Mine remediation project since January of
20 2000.
21 His interest in perpetual care comes
22 through an involvement of closure of -- in closure
23 projects at over fifty (50) mines, many of which have
24 chemically challenged wastes that require care in the
25 long-term.

1 Our presentation today will focus on
2 perpetual care, the related risks, and how we perceive
3 these management -- management of these risks will
4 occur over the long-term.
5 As previously mentioned this week
6 perpetual care has two (2) components. The long-term
7 as well as the management -- the physical systems as
8 well as the long-term and we'll be managing these
9 through an adaptive management that'll address the
10 project's evolving needs over the long term.
11 In our opinion, perpetual care consists
12 of two (2) distinct components, 1) the physical systems
13 that we've discussed at length throughout this last
14 couple days, and 2) the management and oversight of
15 those systems in the long-term.
16 I think it -- I think we should take a
17 little time to actually what we mean by "physical
18 systems." First, we -- what we mean is the
19 constructive works that'll stabilize the site, isolate
20 the contaminants from the environment and establish
21 safe-site conditions.
22 Example of this for the project -- as an
23 example, the project achieves this by permanently
24 sequestering the arsenic trioxide in chambers and
25 stopes in the frozen blocks. But the physical system

1 also needs to include those activities that keep the
2 constructive works functioning, like monitoring,
3 maintenance and repair.
4 The system that we are proposing, the
5 individual thermosiphons, these may need to be
6 refilled, replaced or even repaired. Everyone, I
7 think, can agree upon that. However, the frozen block
8 as a whole will remain complete. This means that the
9 failure of one (1) or more components or a cascading
10 series of failures would not result in the failure of
11 the frozen block method. That's why the frozen block
12 method includes thermosiphons and the commitment to
13 monitor conta -- do maintenance and repair as needed.
14 Monitoring, maintenance and repairs will
15 also help make -- also help to ensure that the physical
16 components remain healthy over time, and if problems do
17 arise, they'll be caught early and dealt with right
18 away. This keeps the frozen block a viable method.
19 The project has been through a vero --
20 very thorough assessment, and I won't belabour the
21 point in my -- these slides. Analysis and design will
22 -- has been designed for the long-term. We have
23 demonstrated the design will work and will effectively
24 control the risks over the long-term.
25 The design of the physical system also

1 incorporates -- design of the system has also been
2 built for a minimum amount of active intervention to
3 keep it going. This means that less, not more,
4 intervention is needed over the long term.
5 That said, the second component or the
6 second requirement for perpetual care is the management
7 and oversight of those physical systems. We have heard
8 from the parties to this assessment that our project
9 can improve upon our management and oversight.
10 Constructive feedback from the parties
11 has led to clarifying the project's vision of the site
12 status over the long term, a commitment to develop a
13 comprehensive management plan and the -- and the pla --
14 and a plan that should include records management, land
15 use constraints, communication for the future
16 generations, scenario analysis and transition planning.
17 I'll take the next few slides to briefly
18 discuss those components. I want to take this moment
19 to clarify what we see can occur over the long-term.
20 And I think we -- we heard a little bit about this last
21 night. With effective engagement I think we can change
22 the view of this as a negative image of a waste site.
23 A properly closed and reclaimed mine can be more than
24 just a hazardous waste site, where the only objective
25 is to keep people away.

1 Working with the communities, we believe
2 that we can create significant, positive benefits
3 through this remediation plan. There is an opportunity
4 for the communities to work together and build
5 something that they can be proud of over the long term.
6 INAC looks forward to being part of this process.
7 In Round 2, IR-7, we presented several
8 case histories where stakeholders had to work together
9 to turn a closed mind into something of value to the
10 community, something that they want to be associated
11 with over the long term.
12 The example before you is the Expo site
13 built on a closed uranium mine in the former east
14 Germany. Our -- two (2) of our technical advisors,
15 Daryl and Bruce, worked on this project for over ten
16 (10) years. And we believe that this is a positive
17 view of perpetual care that has been missing in some of
18 the case histories that have been described this week.
19 By a "positive view," what do we mean?
20 These are two Canadian examples. This is Sullivan mine
21 -- that don't work -- and the Britannia mine just north
22 of Vancouver. Both are good examples of closed mines
23 that are now incorporate -- now -- now important
24 resources to their communities. And people are finding
25 that building a positive value into a closed mine

1 significantly increases the likelihood that future
2 stakeholders will remain engaged to challenge any
3 future lapses in environmental management.
4 It is a challenge, we agree, but we are
5 here for the long term. INAC remains committed to this
6 and will -- INAC and the GNWT remain committed to this
7 and its involvement will improve over time.
8 Although our visions may slightly
9 differ, the parties have provided helpful examples
10 through -- of specific management and oversight tools
11 used for perpetual care in other sectors. Here are
12 five (5) areas that we agree that our current
13 management oversight plans can be improved upon:
14 records management, land use constraints,
15 communications, scenario analysis, and transition
16 planning.
17 We will implement comprehensive records
18 management and information management program. This
19 will be in accordance with current Government of Canada
20 directives, standards, and guidelines; however, this is
21 not enough. We will also explore with the parties
22 innovative techniques used elsewhere for Giant.
23 This needs to be a northern solution for
24 a northern problem. We recognize that the parties have
25 submitted information to the Registry to this effect,

1 and are looking forward to further collaboration to
2 develop the -- develop these thoughts going forward.
3 While part of -- part of the site will
4 remain out of the project's control for over the long
5 term, industrial use, supporting the water treatment,
6 and frozen block, the remainder of the site will be
7 made available for other uses. These are still to be
8 decided.
9 We anticipate that these types of future
10 uses will be determined by the parties, including the
11 Yellowknives Dene, the City of Yellowknife, the GNWT,
12 the North Slave Metis Alliance, as well -- as well as
13 other public stakeholders. We anticipate that the
14 future uses will be subject to appropriate land use
15 controls that need to be decided with discussion for
16 those uses, and with those parties.
17 The parties, Alternatives North being
18 one (1) of the primary ones, have brought forward some
19 interesting thoughts on how to communicate with future
20 generations. Part of these discussions are -- they are
21 needed to go forward. We have -- we have discussed --
22 will be discussing how to best incorporate those
23 hazards into future generations, and look forward to
24 establishing the system.
25 We will look for best practices at

1 similar other -- at similar sites with long-term risks,
2 and we will present and discuss these with the
3 communities going forward.
4 We have committed to -- to a future risk
5 shop with the parties during the October 11th technical
6 workshop. While we have not completed this workshop,
7 the anticipation is it will be developed in
8 collaboration with the stakeholders with materials and
9 support to be provided, and open to the public to -- to
10 proceed. We look forward to -- for this.
11 Our engagement efforts to date have been
12 focussed more on the initial need of moving forward
13 with the remediation plan. However, this does not mean
14 our thoughts have not been towards this commitment. We
15 look forward to participating in this and we think it
16 will be a very interesting discussion in the days to
17 come.
18 In terms of some other good points
19 raised by the parties, such as transitioning from a
20 highly managed to a less intensive care, we believe we
21 have time to plan for this. This should not be
22 something that should be rushed. There is the need now
23 to stabilize the site, to protect it now. But that
24 does not mean that we should not be looking forward and
25 planning for the future.

1 These discussions are preliminary, but
2 they are in our thoughts and we are working -- and we
3 look forward to working further with communities to
4 develop them. Our hope is that these transitions and
5 the plannings that we are doing will be incorporated
6 into our future licence, and ongoing licences as we
7 step forward.
8 All of the above, that I've just
9 described, will be included in a comprehensive
10 perpetual care plan. Our physical systems will be
11 described in a number of detailed design documents and
12 operating plans. Many of these are being initially
13 drafted and will continue to be drafted in detail
14 through detailed design.
15 Our comprehensive perpetual care plan
16 should focus on the management and oversight of those
17 physical systems. We propose to include this plan on
18 the agenda of the MS working group, and at a mutually
19 agreed upon time with the parties.
20 However, this is what we envision. This
21 is what we think should be part of this comprehensive
22 perpetual care plan. But it is only one (1) part of
23 the equation. Our discussion or our thoughts are only
24 that. We need the input from the parties and the
25 people to make this a proper plan.

1 I thank you for your time, Mr. Chair. I
2 will now pass the mic to Mr. Palmer, to speak to
3 adaptive management.
4 MR. MIKE PALMER: Thank you, Mr.
5 Chairman. I'm Mark Palmer, Senior Project Adviser with
6 the Giant Mine remediation project at AANDC.
7 We're on slide 19. Before describing
8 how an adaptive management will be applied at the Giant
9 Mine remediation, I thought it would be good -- would
10 be helpful to provide a definition.
11 The concept was originally conceived in
12 the '70s and has -- and evolved ever since. It can be
13 described as a formal, structured, systematic, and
14 iterative process that will allow management to make
15 informed decisions on mitigative measures in the face
16 of uncertainty as the project progresses. It allows
17 for continuous improvement, which will reduce
18 uncertainty over time, to continuous monitoring
19 systems. In simple terms, it is learning by doing and
20 making changes as needed, based on what was learned by
21 doing.
22 Slide 20. While the concept of adaptive
23 management has been around since the '70s, the
24 application of the concept continues to evolve and
25 different schools of thought or approaches have

1 emerged. One (1) approach is to develop a plan today
2 that is very proscriptive on future monitoring
3 activities, as well as the evaluation criter --
4 criteria for success in the responses that will be
5 taken to mitigate issues. Or, another approach is to
6 develop a robust system now that will enable and
7 support the right individuals to make sound decisions
8 on adaptive management practices in the future.
9 Slide 21. It is our opinion that both
10 approaches are required and that at this time our
11 initial efforts are focussed on developing the best
12 system possible, using both approaches, to get us the
13 best possible system. We need to have a well developed
14 plan to deal with any potential issues, but also have a
15 system which provides the flexibility to identify and
16 implement new mitigative measures, or to modify
17 existing ones, during the life of the project.
18 This is why we connect adaptive
19 management directly to our commit -- commitment from
20 the DAR to develop a comprehensive and flexible
21 environmental management system. We intend to apply
22 this concept in a holistic way throughout the life of
23 the project.
24 In the balance of this presentation I'll
25 describe why we have adopted this approach, what EMS

1 is, how it works, and how we propose to involve
2 interests of the stakeholders in this development and
3 implementation.
4 Slide 22. What environment manage --
5 what -- why environmental management system. The Giant
6 Mine remd project -- remediation project is highly
7 complex and subject to uncertainty. To manage this
8 effectively, the project needs a rigorous and
9 transparent system to: Manage environmental
10 requirements and commitments; establish clear
11 measurable thresholds, objectives and targets;
12 establish and implement a comprehensive monitoring
13 regime; review, interpret, report on monitoring results
14 against established thresholds, objectives and targets;
15 and develop and implement appropriate responses when
16 results differ from the plan to mitigate any concerns
17 that may be identified. A well designed and executed
18 environmental management system will achieve these
19 things.
20 Slide -- slide 23. Large complex
21 projects such as Giant Mine remediation have to deal
22 with a multitude of licence requirements, land use
23 permits, and water licenses, as well as other legal --
24 legislative requirements such as fuel storage
25 regulations, as well as guidelines of -- as well as

1 guidelines. All of these are examples of -- of tools
2 used to manage the environmental -- our environmental
3 responsibilities.
4 Environmental management systems were
5 developed as a tool to integrate environmental
6 requirements into one (1) comprehensive system. An EMS
7 allows us to more effectively manage, report, and
8 respond to our obligations. It allows us to be readily
9 auditable, thereby increasing transparency. One (1) of
10 the key successes of our EMS stakeholder involvement
11 during development of the EMS, as well as continued
12 engagement throughout the life of the project.
13 The EMS working group of the parties has
14 been established by input during the development of the
15 EMS and the project is committed to establishing the
16 environmental monitoring advisory committee that will
17 provide stakeholder input during the implementation
18 phase in areas such as adaptive management.
19 Slide 24. Now I'd like to explain how
20 EMS works. The Giant Mine remediation project, EMS,
21 will be developed to conform with requirements of ISO
22 14001, the international environmental management
23 standard.
24 ISO 14001 is based on the plan, do,
25 check, act, continuous improvement cycle deplicted --

1 depicted in the centre of the slide.
2 And EMS includes the policies,
3 procedures, people, resources in place to effectively
4 manage an organization's environmental aspects or
5 issues. An EMS is typically documented in a manual
6 that includes written requirements that can be
7 implemented and audited.
8 This kind of manual means people have
9 roles to play, know what they are to do, and this can
10 be audited for transparency. The draw -- diagram shows
11 the main elements of an EMS including the policy and
12 planning elements, including a documented policy signed
13 by senior management, an inventory of all issues,
14 regulatory requirements and commitments, objectives and
15 targets, programs and plans.
16 The implementation or operation elements
17 include the resources, roles, responsibility and
18 authority, training, communication, including
19 reporting, documentation, operational procedures, and
20 emergency preparedness and resource response
21 procedures.
22 The checking element includes
23 monitoring, and measurement, including compliance with
24 regulatory requirements and commitments, record keeping
25 and auditing. And finally, the management review

1 element which requires periodic regular review of
2 performance of an EMS including assessing opportunities
3 for continuous improvement and adaptive management.
4 Slide 25. The following series of
5 slides will show how the adaptive approach is
6 implemented to the EMS. At this first step, the EMS
7 will help us design environmental management plans for
8 all key mine components including identification of
9 targets and objectives, action thresholds, and
10 monitoring requirements. This was the process tha --
11 that we are initiating with the EMS working group of
12 the parties which I'll elaborate on further in my
13 presentation.
14 Slide 26. The next step in the process
15 is to monitor and report on the performance of the
16 project in accordance with the requirements in the EMPs
17 that are established in EMS.
18 Slide 27. The information collected by
19 monitoring programs is then reviewed, interpreted and
20 compared against established targets. Monitoring
21 results will lead to two (2) possible scenarios,
22 performance according to plan, meeting standards and/or
23 targets or exceeding standards or results that are
24 beyond threshold values which may not be performing
25 according to the plan.

1 Slide 28. If there has been no
2 exceedence and everything is on track, we'll continue
3 to monitor or look for ways to continuously improve
4 systems and performance. If monitoring result indicate
5 that a threshold requirement or standard has been
6 exceeded, that will trigger a process of investigation
7 to understand the cause and to identify potential
8 alternative approaches.
9 Slide 29. Potential way -- potential
10 ways to improve could be setting a more stringent
11 target and involving community further in monitoring or
12 incorporation of new technologies or advancements in
13 our plans. Adaptive management could be in the form of
14 altering the way we are carrying out activities, such
15 as stopping work due to windy or dry conditions,
16 modifying or implementing additional measures in
17 management plans.
18 Slide 30. Now I'd like to describe in
19 more detail our approach to development of our EMS.
20 Based on the recommendations provided by the parties,
21 the project team following the mine component
22 objective-based approach outlined in the Board and
23 AANDC's guideline for the development of closure and
24 reclamation plans as appropriate for this remediation
25 project. This is similar to other development

1 projects.

2 The environmental management plans --

3 plans we've developed for these seven (7) mining

4 components: Tailings, freeze and underground, open

5 pits, Baker Creek, water treatment plant, contaminated

6 soils, buildings and infrastructure.

7 A matrix would be developed for each

8 component to gather relevant information in the

9 following areas to guide the development of our EMPs:

10 Objectives, remedial activity, measure performance,

11 closure criteria, targets and action levels and

12 outstanding reclamation research and engineering

13 studies. These will be pre -- prepared to fill in

14 existing gaps and required to establish -- that are

15 required to establish targets and actions levels.

16 We have initiated the process of

17 reviewing this matrices with the EMS working group of

18 the parties to allow interested parties to be informed

19 of current design details, provide meaningful input on

20 environmental management and monitoring, including the

21 incorporation of traditional knowledge.

22 Slide 31. The completed matrices will

23 form the basis of environmental management plans.

24 Environmental management plans, EMPs, outline programs

25 of activities which have been identified as part of the

1 environmental management system. They'll address the
2 implementation, controlling, monitoring and reporting
3 aspects of main elements or components of the project.
4 Every mine component will have an EMP.
5 In addition, other EMPs will be developed to cover
6 other regulatory items, such as fuel storage, spill
7 response, health and safety requirements and community
8 involvement and development. These EMPs are required
9 as part of due diligence and compliance with
10 environmental legislation and regulations.
11 Slide 32. Each EMP will be documented
12 in a standard template that will include the following
13 elements: Objectives of the management, measure
14 performance and closure criteria. There's a key link
15 between design of EMP -- between the design process and
16 EMPS. Both processes are interdependent, and -- depend
17 on each other, and -- and inform each other. This is a
18 key opportunity for stakeholder involvement into the
19 project.
20 The information required, and the
21 scheduled for collecting the information to track
22 performance, triggers that will let us know when issues
23 need to be action under adaptive management, research
24 to fill in gaps that exist in the design either through
25 the design process or additional studies, roles of the

1 party on the project to ensure accountability, and
2 methods for reporting on -- on the information we
3 gather.
4 Slide 33. This slide will demonstrate
5 how we plan to operate -- operationalize the EMPs
6 within the project. For this example, we're using the
7 tailings mine component EMP. We intend to engage with
8 the parties and the public through EMS -- EMS working
9 group of the parties to gain input on matrices for each
10 of the mine components.
11 Once this input has been received, the
12 project team will develop the environmental management
13 plan. The tailings EMP will include sub-plans for
14 specific issues of concern related to that element, for
15 example dust. The finalized EMP will form part of the
16 specifications for contractors who are responsible for
17 implementing the project.
18 The contractor will be responsible to
19 develop a plan to meet the requirement of the EMPs,
20 including for example a dust sub -- sub-plan for dust
21 control. Implementation of the plan by the contractor
22 will be monitored by the project, and reported to
23 regulatory authorities including the Land and Water
24 Board, as well as the environmental management advisory
25 committee.

1 Slide 34. As I've been describing the
2 process to develop and implement EMS, I've been
3 describing how we are and intend to make this a
4 collaborative process with stakeholder involvement.
5 Within the project, there's an internal
6 environmental management working group with
7 representatives from INAC, GNWT, and PWGSC. The
8 environmental management group is the primary body
9 responsible for EMS planning, development,
10 implementation, monitoring, and engagement with the
11 parties.
12 The project team is committed to
13 identifying priorities and developing environmental
14 management plans collaboravly -- collaboratively with
15 the environmental management working group of the
16 parties. The EMS working group of the parties has met
17 three (3) times since March of this year focussing on
18 policy development, definitions, and EMS development.
19 The meetings of -- or the minutes of these meetings
20 have been placed on the registry.
21 Membership of the working group includes
22 YKDFN, Alternatives North, the City, Environment
23 Canada, DFO, GNWT, Public Works, and AANDC. The Review
24 Board and Mackenzie Valley Land and Water Board have
25 been invited as observers. We'd welcome the

1 participation of the North Slave Metis on this working
2 group, as well.
3 A terms of reference has been developed
4 for the working group, and we look forward to working
5 together after these hearings develop a mutually agreed
6 to set of priorities.
7 Slide 35. I would like to provide a
8 brief overview of our current and planned activities
9 with respect to the EMS. The development of the EMS
10 was initiated earlier this year. In 2012 we were
11 target -- targeting the completion of a GAP analysis of
12 current -- current environmental management activities
13 at the site, and in the project to identify what
14 information gaps exist in order to develop an ISO 14001
15 compliant EMS.
16 We have developed a draft environmental
17 health and safety community-based policy for the
18 project, sought input from the parties to the EMS
19 working group of the parties, and are currently seeking
20 approval from senior management within AANDC.
21 In 2013 we intend to complete an EMS
22 manual that is compliant with ISO 14001, and to
23 implement that system for ongoing care and maintenance
24 activities at the site.
25 Further, we intend to work through the

1 matrices on the seven (7) mine components with the
2 parties, and in -- and to initiate development of
3 approximately twenty (20) EMPs that are required. We
4 are also currently developing and implementing a
5 monitoring program to determine the baseline conditions
6 for the project.
7 Slide 36. Mr. Chairman, in conclusion,
8 all of the project components, especially the frozen
9 block and the commitments around it, are robust and
10 will minimize risk over long term. We are committed to
11 develop a perpetual care plan in collaboration with the
12 parties, and EMS is a proven approach and effective
13 tool to support adaptive management. And the community
14 will continue to be involved extensively and
15 meaningfully in environmental monitoring and adaptive
16 management. Thank you, Mr. Chairman.
17
18 (BRIEF PAUSE)
19
20 QUESTION PERIOD:
21 THE CHAIRPERSON: I'd like to thank the
22 Developer for your presentation. Now we're going to go
23 into the list of orders for questioning. So this
24 morning we did the monitoring, oversight and perpetual
25 care by the Developer. So I want to go to the parties

1 in the reverse order here.
2 I'm going to go to Department of
3 Fisheries and Oceans Canada. Is there any questions
4 for the -- the Developer on their presentation?
5 MS. MORAG MCPHERSON: Good morning.
6 Morag McPherson with Fisheries and Oceans. We have no
7 comments or questions for the Developer at this time.
8 We are a member of the EMS working group
9 and have been pursuing several areas of the development
10 project where we feel that there's more monitoring
11 required in environmental management plan development,
12 along with getting input from the parties in --
13 involved with this.
14 We've out -- summarized some of that
15 involvement in our technical submission, and will be
16 presenting some of the areas where we recommend that
17 they be developed into measures to ensure that
18 continued work on these areas move forward. And that
19 will be in our presentation tomorrow. Thank you.
20 THE CHAIRPERSON: Thank you. I want to
21 go to Environment Canada.
22 MS. AMY SPARKS: Amy Sparks,
23 Environment Canada. We have no questions about the
24 presentation. Thank you.
25 THE CHAIRPERSON: Okay, thank you. I

1 want to go to the North Slave Metis Alliance.

2 MS. SUSAN ENGE: Thank you, Mr. Chair.

3 Susan Enge, Metis Alliance. I have a question. I

4 notice in one (1) of your slides you talk about two (2)

5 schools of thought to the development of your

6 management plan and how adaptive it would be in order

7 to reduce uncertainty over time.

8 And time, to the Metis, we view as

9 something that we're very concerned with, because this

10 is a -- a concept that you're developing that involves

11 perpetual care. Like, there's no end date where we can

12 stop worrying about the frozen blocks.

13 As a Metis person, I believe that we

14 have a different school of thought to you -- to you, as

15 the Developer. And our school of thought can probably

16 best be reflected as not having to worry about the

17 environment and -- and a possible failure of your plan.

18 So I appreciate the thought over the monitoring aspect

19 of your proposal here today.

20 My question is: How do you plan to

21 build an adaptive management plan when you have a

22 difference of opinion that the Metis may have, or

23 aboriginal people in this community may have over a

24 remediation aspect in the future? You talk about future

25 generations, but my question is: How do you build into

1 your adaptive management plan confl -- conflict of
2 resolution with aboriginal people and Metis cultural
3 values and priorities? Because they will differ from
4 what we think needs to be done to resolve a problem in
5 the future, and it may differ with your view.
6 So you -- you -- I appreciate the fact
7 that you talk about you want to build in and include
8 North Slave Metis Alliance; that's the first I've heard
9 of it this week, so thank you very much.
10 So, I'll leave it at that and that is my
11 question. How do you build in two (2) different values
12 and find a way for it to work together? And we very
13 much look forward to being included in the -- the
14 future dialogue and discussion about your remediation
15 plans in future and the systems that you set up to deal
16 with -- with difficulties down the road. Thank you.
17 THE CHAIRPERSON: Thank you for your
18 question. I'm going to go to the Developer to the
19 question.
20 MR. ADRIAN PARADIS: Adrian Paradis on
21 behalf of the project team. I believe there's a number
22 of common objectives that we share. Protecting human
23 health, safety of the environment, I think is a place
24 where we all start from. From there, it comes down to
25 dialogue to try and come to a consensus, where

1 possible. And it always ultimately comes back to what
2 is the best for the protection of human health and the
3 safety of the environment. Thanks.
4 THE CHAIRPERSON: Thank you. I'm going
5 to go back to North Slave Metis.
6 MS. SUSAN ENGE: Thank you, Mr. Chair.
7 Perhaps we would like a commitment then from the
8 Developer to -- to build in their plan a process where
9 the Metis -- and I'm not sure, I'm not speaking for any
10 other aboriginal group, would be part of that system --
11 as you say, promises a rigorous system to manage and
12 monitor the remediation of the site down the road.
13 So if we can get a commitment to be part
14 of that decision-making process, that would allow us
15 some reassurance to some degree. And that would also
16 include some kind of committee to incorporate
17 traditional knowledge down the road. Thank you.
18 THE CHAIRPERSON: Thank you. I'm going
19 to go to the Developer.
20
21 (BRIEF PAUSE)
22
23 MR. MIKE PALMER: Mike Palmer, Mr
24 Chair. The process going forward, or how we envision
25 it now, is -- as I said, we're developing the EMS. We

1 have the EMS working group for the parties and we've
2 extended an invitation to participate on that.
3 The future monitoring and oversight of
4 the EMS adaptive management perpetual care is through
5 the oversight working group, which we don't have all
6 the details. We've comm -- or the oversight -- or the
7 oversight committee, which we don't have all the
8 details. We want to work with the parties to -- to
9 establish those.
10 So that's yet -- we -- we need to work
11 together and establish the way going forward. But
12 everyone -- we want a -- a lot of stakeholder
13 involvement in that, so everybody will participate.
14 Thank you.
15 THE CHAIRPERSON: Thank you. North
16 Slave Metis?
17 MS. SUSAN ENGE: No further questions,
18 Mr. Chair. Thank you.
19 THE CHAIRPERSON: Thank you. Before I
20 go to the other -- the people -- the parties I have
21 here, I want to call for a lunch break now. We're
22 going to come back at 1:00.
23 And then next on the list is
24 Alternatives North, Yellowknives Dene First Nation,
25 City of Yellowknife. Then we've got Board -- Board

1 technical adviser and Board staff and counsel and then
2 Board members. So we'll stop there. Thank you.
3
4 --- Upon recessing at 11:52 a.m.
5 --- Upon resuming at 1:12 p.m.
6
7 THE CHAIRPERSON: Okay, thank you.
8 We're going to continue on. Just to give you just a
9 quick update on the -- the transcripts for September
10 11th is now online, on the -- I believe on the Review
11 Board website, so it's there, just for your
12 information.
13 Also, the presentations this afternoon,
14 after we've done the questions, we're going to go to
15 YKD from the schedule 45, they're going to do theirs in
16 twenty (20). Alternatives North agree to go from sixty
17 (60) to thirty (30), I want to thank Kevin, and North
18 Slave Metis from thirty (30) to ten (10), so.
19 Then what we'll do then is we'll add
20 that time to -- that we save there to questions. So
21 we'll allow probably two (2) hours for questioning.
22 And so we'll go until 3 -- 3:15. And so we'll continue
23 on.
24 So I'm going to -- having said that, I'm
25 just going to go to -- back to questions. Now on the

1 list of questioning I have is the Alternatives North,
2 Mr. O'Reilly.
3 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
4 Kevin O'Reilly, with Alternatives North. The issue of
5 perpetual care is one (1) of the main things that we've
6 raised throughout this environmental assessment. And I
7 think we've made some good progress, and that's a good
8 thing.
9 We see that the Developer's starting to
10 use our language and concepts. But I think this is
11 also the first time the Developer has ever committed to
12 a perpetual care plan. And I just want to give a
13 little bit of context here. On August the 10th, the
14 Developer submitted a five (5) page paper called, Long-
15 term stewardship. And -- but it's only in the
16 presentation that we saw today where they finally
17 actually committed to preparing and developing a
18 perpetual care plan.
19 So can they tell us sort of what
20 happened between August the 10th and -- and the
21 presentation today? Thanks.
22 THE CHAIRPERSON: Thank you. Before I
23 go to the Developer, as well, we still have after
24 Alternatives North, the Yellowknives Dene First Nation
25 and the City, and then again Board technical advisor,

1 Board staff, Board counsel and Board members.
2 So, again, I'm just going to ask that --
3 if we can take a look and prioritize our questions, as
4 well. So I'm going to go to the Developer.
5 MR. ADRIAN PARADIS: Adrian Paradis, on
6 behalf of the project team. Perpetual care has been an
7 ongoing topic of discussion throughout the hearing at
8 our -- you've heard it from folks across the table,
9 that even with all of the reviews that have gone on,
10 perpetual care is not a -- it's a new topic. It's a
11 new topic of science. It's a new topic of discussion.
12 Our thoughts are evolving.
13 The paper on the 10th was our
14 understanding and where we're at. And we're moving
15 forward. I think some of the folks that are actually
16 across on the table have probably spent more time than
17 a lot of the folks in the -- I'll be as bold as to say
18 potentially the world of thought on perpetual care.
19 We have spent a lot of our time on
20 developing what we think is a sound scientific process
21 to stabilize and secure the site. Our attention now is
22 turning towards the long-term care of that. Thank you.
23 THE CHAIRPERSON: Mr. O'Reilly...?
24 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
25 Kevin O'Reilly with Alternatives North. If I can just

1 ask then -- I'll try to maybe ask it very quickly in a
2 different way.
3 Is it fair to say, though, that this
4 presentation is the first time we've seen a commitment
5 to prepare an actual perpetual care plan?
6 THE CHAIRPERSON: Thank you. To the
7 Developer...?
8 MR. ADRIAN PARADIS: Adrian Paradis.
9 Confusion you're seeing here is I thought we had had --
10 there's a commitment on the table to -- there's not a
11 commitment on the table. There is a commitment to
12 develop a perpetual care management plan. Thank you.
13 THE CHAIRPERSON: Okay. Thank you.
14 Mr. O'Reilly...?
15 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
16 Kevin O'Reilly. I -- I think I've made my point, and
17 I'll -- I'll just move on.
18 So the Developer -- just in their first
19 day they said in their presentation that there is no
20 significant public concern with the project. There's,
21 therefore, no basis for binding measures from the
22 Review Board.
23 So how do we get from this commitment to
24 prepare a perpetual plan to make it actually a
25 requirement for this project? Not just something

1 they're going to commit to do but make it a requirement
2 so that we can all make sure that it's followed up on
3 in some way.
4 So can the Developer tell us how we move
5 from a commitment to a requirement? Thank you.
6 THE CHAIRPERSON: Thank you, Mr.
7 O'Reilly. I'm going to ask all speakers to put the mic
8 close to their mouth so we could make sure we -- we
9 hear well. I'm going to go to the Developer...?
10 MR. ADRIAN PARADIS: Adrian Paradis on
11 behalf of the project team. I think that this is a
12 logical place for that -- this plan will logically fit
13 into a future water licence which will be bound by
14 appropriate legislation going forward. Thank you.
15 THE CHAIRPERSON: Mr. O'Reilly...?
16 MR. KEVIN O'REILLY: Thanks. Kevin
17 O'Reilly with Alternatives North. Maybe I'll just try
18 to rephrase the question.
19 So is the Developer then suggesting that
20 the Review Board can make a binding measure to include
21 a perpetual care plan as a term or a condition to a
22 water licence? Thanks.
23 THE CHAIRPERSON: Thank you. I'm going
24 to go to the Developer to the question.
25

1 (BRIEF PAUSE)

2

3 MR. ADRIAN PARADIS: I'm not going to
4 try and tell the Board its jurisdiction. The Board
5 understands better than any of us how -- what their
6 responsibilities and what their -- their authorities
7 are.
8 If this Board sees fit to make a
9 recommendation to the Minister that a requirement for a
10 perpet -- perpetual care management plan is a
11 requirement out of this environmental assessment, and
12 it is signed, it'll be -- become a binding measure on a
13 future regulator. Thank you.
14 THE CHAIRPERSON: Thank you. Kevin
15 O'Reilly...?
16 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
17 Kevin O'Reilly with Alternatives North. I think I'll
18 move on. I want to turn to the presentation, though,
19 and I'm sorry I don't have the clicker, but if we could
20 go to slide 9.
21 And this is the slide where the
22 Developer talks about a number of case histories of
23 closed mines. And I think the Developer in the
24 presentation talked about how they had put some of that
25 together for the Review Board in response to a Second

1 Round Information Request from the Review Board. I
2 think it was number 7. It's document number 390. And
3 when I looked at that, it's about a three and a half (3
4 1/2) page table.
5 Has -- has the Developer filed anything
6 else on the public record about perpetual care -- or
7 these particular case studies for everybody to have a
8 look at? Thank you.
9 THE CHAIRPERSON: Thank you. I'm going
10 to go to the Developer.
11
12 (BRIEF PAUSE)
13
14 MR. ADRIAN PARADIS: Adrian Paradis on
15 behalf of the project team. The -- the IR in question
16 has included a number of references, a number of
17 locations to -- for the information that incorporated
18 that -- those -- that table. It was a summation,
19 granted, but there is numerous source documents that
20 were cited in that document. Thank you.
21 THE CHAIRPERSON: Kevin O'Reilly...?
22 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
23 Kevin O'Reilly with Alternatives North. But is -- is
24 there a bigger document than just this three and a half
25 (3 1/2) page table? Was -- or is that it? Thanks.

1 THE CHAIRPERSON: Go back to the
2 Developer.
3 MR. ADRIAN PARADIS: Adrian Paradis on
4 behalf of the project team. No, this is a one (1) pag
5 -- this was the table of -- the summary for -- for the
6 -- for the Information Request.
7 THE CHAIRPERSON: Kevin O'Reilly...?
8 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
9 Kevin O'Reilly with Alternatives North. I -- I'll move
10 on to slide 11 of the presentation, please. And this
11 is where the Developer lists five (5) areas that they
12 intend to include or commit to include in a perpetual
13 care plan. And it -- it's a good list. It's a good
14 starting point. And it actually reflects very closely
15 what we've suggested, except for one (1) very, very
16 important omission, long-term funding.
17 If we're going to do all of these
18 things, where's the long-term funding to do this work?
19 And I know we're probably going to talk more about this
20 tomorrow, but why is long-term funding not on this
21 list? Thank you.
22 THE CHAIRPERSON: Thank you, I'll go
23 back to the Developer.
24 MR. ADRIAN PARADIS: Adrian Paradis on
25 behalf of the project team. We do have a presentation

1 for tomorrow that discusses long-term funding. I think
2 that a lot of the questions there will be answered.
3 Thank you.
4 THE CHAIRPERSON: Okay, Kevin
5 O'Reilly...?
6 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
7 It's Kevin O'Reilly with Alternatives North. I'd -- if
8 you don't include long-term funding in a perpetual care
9 plan, I just don't know how you carry it out. But I'm
10 -- we're going to have a lot more discussion about that
11 tomorrow.
12 I want to move on to slide 12, please.
13 And at the bottom of this slide, this is about records
14 management. There's -- I guess we can call it a
15 commitment, although they talk about exploring, an
16 advisory group to give them some advice.
17 This is the first time we've seen this
18 idea, so I'm just wondering: Do they have any further
19 thoughts about who would sit on this advisory group,
20 when they might do their work, what kind of resources
21 they might get and so on? Thank you.
22 THE CHAIRPERSON: Thank you.
23 Developer...?
24
25 (BRIEF PAUSE)

1

2 MR. ADRIAN PARADIS: Adrian Paradis on
3 behalf of the project team. We intend to -- the
4 intention of this -- of this bullet is to -- we are
5 planning to approach this as -- in the same way as we
6 would approach any of other our -- any of our other
7 management plans. If the environmental management
8 system working group wants to make this a priority,
9 we'll table this and we'll start working on it.
10 I think you heard here through a lot of
11 what Mark has spoken to today is, we're trying to work
12 with the parties to establish what is a priority of the
13 working group, what -- what plans should be worked on.
14 This can be one (1) of them. The future advisory group
15 of the Giant Mine advisory committee that we've
16 committed to establishing for oversight, that might be
17 another logical place that has some -- a place to
18 discuss this. Thank you.
19 THE CHAIRPERSON: Thank you. Kevin
20 O'Reilly...?
21 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
22 Kevin O'Reilly with Alternatives North. I -- I guess,
23 for the record, we would be interested in participating
24 in -- in that in some fashion. I'm not sure whether it
25 will be a -- a different advisory group, or through the

1 environmental management working group, or some sort of
2 an oversight body, but we're interested.
3 I want to move on the next -- sorry,
4 slide 13, if I may, please. And so in the second round
5 of Information Requests we asked the Developer about
6 what sort of land use controls and tools there might be
7 moving forward with the site. And the response was
8 that they would look at this in consultation with
9 others.
10 But we're still only talking about this
11 in the -- in the context of the remediation plan. If
12 we're going to have an informed discussion of -- of
13 this, we thought we -- it would be better to have some
14 kind of a background paper or understand what the --
15 the potential tools are that might be available for
16 land use controls into the future, whether it's the
17 City or the Territorial government or the Federal
18 Government, so we understand what the -- the suite of
19 options are and maybe some of the advantages and
20 disadvantages, but that work hasn't been done.
21 And here we are. You've got one (1)
22 more day to look at this. Why hasn't the -- the
23 Developer actually put any work into looking at what
24 those options might be? You know, they could have
25 talked to the City. They could have talked to GNWT.

1 They -- they know what the federal system is in terms
2 of land use controls and so on, but none of those
3 options are available in a place so we could have an
4 informed discussion about it.
5 Why -- I'm just wondering why that work
6 hasn't been done, and we asked for it. Thanks.
7 THE CHAIRPERSON: Thank you, Kevin
8 O'Reilly. To the Developer to the question.
9 MR. ADRIAN PARADIS: Adrian Paradis, on
10 behalf of the project. Our focus right now is on
11 stabilizing the site, land use constraints and this is
12 -- this is important work, but our focus is on right
13 now stabilizing the site. This land use constraints
14 going forward is respectfully years and years away from
15 becoming into fruition.
16 There is time to have a fully informed
17 discussion going forward into the future. But at this
18 point in time, our focus and our priority is to
19 stabilize the site immediately, and that's where our --
20 that's where our attention has been. Thank you.
21 THE CHAIRPERSON: Kevin O'Reilly...?
22 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
23 Kevin O'Reilly, with Alternatives North. I'm a bit
24 disappointed with the answer. But after eight (8)
25 years of developing the plan, four (4) years of an EA,

1 the work hasn't been done and the -- but the solution
2 put forward by the Developer is a perpetual care one,
3 and we don't have a plan to do that.
4 I do want to move on. My last question
5 is on slide 35, if I may. And I think it's about in
6 the li -- little bit lower middle of the slide it says,
7 "EMS manual compliant with ISO 14001."
8 EMS, I believe, is Environmental
9 Management System Manual compliant with ISO,
10 International Standards Organization, and it's a way of
11 -- it's an international approach to sort of making
12 sure that best practices are followed with this
13 particular project.
14 So when I see that point, it says,
15 "Compliant with." It doesn't actually say that the
16 project will actually apply for ISO 14001 certification
17 and maintain it. Is that -- is it just to be
18 compliant, or will the Developer actually apply for
19 certification, and then maintain it?
20 Because -- and why I ask this question
21 is it gives a certain recognition value that they're
22 doing things right and that there's an independent
23 outside auditor that actually will come in and check to
24 make sure that it's being done that way.
25 So when I see the word "compliant,"

1 that's not the same as actually doing it. So I just
2 want to get some clarification on that from the
3 Developer, please. Thanks.
4 THE CHAIRPERSON: Thank you. I'm going
5 to go to the Developer to the question. And if you
6 could help explain it.
7 MR. MARK PALMER: Thank you, Mr. Chair.
8 Mark Palmer. No, we are not going to be compliant. We
9 are going to be compliant. We're not going to get a
10 certification. We're going to be compliant with ISO
11 14001.
12 My reasoning for that is we are going to
13 have an independent third-party audit on the -- on the
14 project. We think that when we develop the terms of
15 reference in -- in consultation and get input from the
16 Oversight Committee, that we'll have more flexibility
17 do a better job and have a wider range within the
18 audits.
19 The audits within the ISO system are
20 quite focussed on the process. We feel this would be a
21 better -- a better -- a way of having independent
22 audit. Thank you.
23 THE CHAIRPERSON: Thank you. Mr.
24 O'Reilly...?
25 MR. KEVIN O'REILLY: Thanks, Mr. Chair.

1 Kevin O'Reilly, with Alternatives North. So I'm -- I'm
2 just trying to understand this.
3 Is having ISO 14001 certification, is
4 that exclusive? Or if you have that certification it
5 doesn't allow you then to have an oversight body and a
6 process or are they mutually exclusive processes? Is -
7 - is that what the Developer's saying? Thanks.
8 THE CHAIRPERSON: Thank you. To the
9 Developer.
10 MR. ADRIAN PARADIS: Adrian Paradis, on
11 behalf of the project team. I'll ask Michael Van
12 Aanhout to further explain this concept. Thank you.
13 MR. MICHAEL VAN AANHOUT: Thank you,
14 Mr. Chair. Michael Van Aanhout.
15 The standard ISO 14001, as -- as Kevin
16 has related, is an international process standard that
17 organizations can subscribe and it's an auditable
18 (phonetic) standard. And in the preamble to the
19 standard it actually describes different options that
20 an organization may choose in applying it.
21 And organization may choose to adopt the
22 standard and audit itself and self-declare. It may
23 choose to have a third-party audit the environmental
24 management system, or as -- as Kevin has been referring
25 to, it may go the next step of bringing in a Registrar

1 to go through a certification process. There's an
2 international and national regime around ISO standards
3 related to that.
4 ISO 14001 had been in place since the
5 mid-'90s and has been broadly up -- taken up across
6 industry and public sector and there's been a vide --
7 wide variety of practices related to that with organize
8 ma -- organizations making those three (3) different
9 choices.
10 If you look back across that, what you
11 can see is that you can't really draw a correlation
12 between that decision and the environmental performance
13 of -- of the organization. And, in fact, as is being
14 discussed here in the case of the Giant Mine
15 remediation project, where best practice around
16 environmental management and -- and broader
17 sustainability management is going now is the
18 engagement of communities and -- and citizens in an
19 organization's environmental management system.
20 And so it was in looking at these
21 options that the project team came up with a proposed
22 approach of adapting a world class standard, bringing
23 in a third-party auditor to audit that standard. By
24 not pursing certification, the owner in this case has
25 more input into the scope of what that audit would be.

1 And so you could foresee a situation where the
2 Developer would be sitting down with parties to discuss
3 the scope of the audit and be able to incorporate some
4 of the concerns or particular areas of inquiry that
5 you'd like to have the auditor pursue.
6 In the case of a registration audit,
7 it's a very prescribed process in accordance with the
8 international standard that doesn't afford that kind of
9 flexibility. So in the opinion of the project, that
10 kind of system coupled with a community advisory group
11 that both sees the results of aud -- of the audit and
12 has input into it will over time build increase in
13 public confidence in the project, and engagement, and
14 involvement in the project.
15 Thank you, Mr. Chair.
16 THE CHAIRPERSON: Thank you. Kevin
17 O'Reilly...?
18 MR. KEVIN O'REILLY: Thanks, Mr. Chair.
19 It's Kevin O'Reilly. I -- I want to thank the
20 Developer's consultant for that -- that response. It's
21 -- it's helpful. But I guess my understanding is that
22 they're still not mutually exclusive and -- yeah, I'll
23 just leave it at that. We will talk about best
24 practices around perpetual care in our presentation.
25 But thanks for the patience with my que -- my questions

1 today.

2 THE CHAIRPERSON: Okay. Thank you,

3 Mr. O'Reilly. Moving on, next is the Yellowknives Dene

4 First Nation.

5 MR. TODD SLACK: Thanks, Mr. Chair.

6 Todd Slack for the Yellowknives Dene. We'll stick with

7 the last topic and a two-part question here.

8 Who are the members of the Giant Mine

9 oversight committee?

10 THE CHAIRPERSON: I'll go to the

11 Developer.

12 MR. ADRIAN PARADIS: Can you please

13 clarify the question. Thank you. Adrian Paradis.

14 MR. TODD SLACK: Mr. Palmer just said

15 that there's a Giant Mine oversight committee that will

16 set the terms of reference and I believe he's referring

17 to the -- the minutes of which are -- are on the record

18 or as part of the IRs for -- for Alternatives North.

19 I think December 9th, 2011, was the last

20 meeting, if that might rink a bell. Can I get some

21 clarification on that?

22 MR. ADRIAN PARADIS: Adrian Paradis on

23 behalf of the project team. I think that's -- the

24 reason why I was asking for clarification there is the

25 Giant Mine oversight committee that is the co-

1 proponents. That is, the Government of Northwest
2 Territories and Government of Northern Canada.
3 I think in reference to what Mr. Palmer
4 is speaking to is the potential -- it's not the
5 potential, it's the commitment to establish an
6 oversight body or a community monitoring body, namely
7 which is still being somewhat described. I think we've
8 described it as Giant Mine advisory committee. It may
9 have on some other future title or reference, but the
10 intention is that is the body. I -- Mark, if I've
11 misstated anything, please clarify.
12 THE CHAIRPERSON: Thank you. Back to
13 the Yellowknives Dene First Nation.
14 MR. TODD SLACK: Thanks for that. Good
15 to get that one (1) out of the way.
16 So, Mark, if you -- well, I guess we
17 don't have to bring up the slide, but on the bottom of
18 slide 35 it talks about the baseline monitoring is in
19 development, and during slide 1 -- or 21, pardon me,
20 you described how important it was to have a well
21 developed plan for the EMS and EMPs.
22 On November 12th, 2009, the regional
23 director general from INAC at the time wrote to the
24 Board and stated that work on the Giant Mine monitoring
25 and management was already, quote, "well advanced."

1 Would you agree that that's the case, or
2 that was the case, and would you describe the current
3 situation as being well advanced?
4 THE CHAIRPERSON: Thank you. I'm going
5 to go to the Developer to the question.
6
7 (BRIEF PAUSE)
8
9 MR. ADRIAN PARADIS: Momentarily, Mr.
10 Chair. It's Adrian Paradis on behalf of the team.
11
12 (BRIEF PAUSE)
13
14 MR. ADRIAN PARADIS: Adrian Paradis on
15 behalf of the team. There is an extensive, and there
16 is a very robust oversight on the site. I think the
17 letter that the -- that you're refer -- referencing
18 there, Todd, is what extension, or what -- what type of
19 oversight was involved.
20 We're going to discuss it -- we'll be
21 discussing it at depth tomorrow, but I -- in the
22 development of it of all, the assessment report and for
23 that, we have a robust system of oversight currently.
24 We've heard from the parties that they -- the belief is
25 that it needs to be expanded upon to include greater

1 community involvement.
2 We are incorporating that into -- into
3 the project, but that is only one (1) small component
4 over the overall -- overall oversight of the entire
5 project. We do have an extensive discussion about this
6 tomorrow with a large presentation about what is
7 involved in that entire overall oversight. Thank you.
8 THE CHAIRPERSON: Thank you. I'll
9 abbreviate Yellowknives Dene First Nation to YKDFN.
10 YKDFN...?
11 MR. TODD SLACK: Thanks, Mr. Chair.
12 And I'm happy to revisit that, and I'll provide the
13 exact language tomorrow.
14 I'll -- I'll move on to slide 18. This
15 talks about transition planning and, Adrian, your point
16 was that there -- there's time here to -- to resolve
17 this and arrive at a good outcome, but considering the
18 project has had thirteen (13) years and the Baker Creek
19 remediation plan is not in place, and there's no real
20 ETA attached to that, what language would the proponent
21 find acceptable for a binding measure to ensure that
22 the transition and perpetual care plans are going to be
23 completed within an appropriate schedule?
24 THE CHAIRPERSON: Thank you. I'll go
25 to the Developer.

1 (BRIEF PAUSE)

2

3 MR. ADRIAN PARADIS: Adrian Paradis on
4 behalf of the project. I'm not going to be ever so
5 bold as to try and suggest appropriate language on the
6 fly right now. It is, as I've previously said, it is
7 up to the Board to make their binding decision, and how
8 that goes forward.
9 I think the commitment stands for
10 itself, and the commitment is to establish and work
11 forward to a highly managed remediated site to a more
12 passive care and -- care and manage -- care and --
13 management system. Excuse me, folks, it's been a very
14 long week.
15 Yeah, I -- I honestly think -- I'm not
16 about to try and suggest language on the fly right now,
17 so I -- I think that there is time to discuss this.
18 Appreciate it.
19 THE CHAIRPERSON: Thank you. YKDFN...?
20 MR. TODD SLACK: Thanks, Mr. Chair.
21 And, yeah, we're happy to work with the proponent on
22 any mutually acceptable measures because the -- as I --
23 I responded to Mr. Bayha's question there, there's a
24 real push from the parties here to work towards binding
25 measures because of the fear that the commitments won't

1 be lived up to.
2 And so coming to the -- coming to my
3 final question here, the -- on slide 8, Adrian had been
4 talking about the need to incorporate community and
5 party views in terms of a -- to have a successful and
6 positive outcome for this proposal.
7 So we've heard quite a bit on the
8 different parties' view towards the quality of the past
9 engagement, so what -- how can we approach this process
10 moving forward with new actions, and I'll use the word
11 "measures" again, that would lead us to a better
12 outcome than people have felt the last few years have
13 provided? Thanks.
14 THE CHAIRPERSON: Thank you for your
15 final question. And I'm going to go to the Developer.
16
17 (BRIEF PAUSE)
18
19 MR. ADRIAN PARADIS: Adrian Paradis on
20 behalf of the team. As previously stated, the project
21 has been focussed on trying to stabilize and develop a
22 plan that stabilizes the site going forward. That
23 said, there is a lot of opportunity to work and try and
24 develop a greater vision for the site.
25 We've heard a lot of the monster under

1 the ground that's sleeping. And it's a legacy that we
2 are challenged as our responsibility to try and
3 address. And that is a daunting task, but it is --
4 you've seen the folks behind us here. We've -- we're
5 here in -- in the community. We're here from all folks
6 across north -- across Canada, working towards --
7 towards this. And it's only one (1) component of it.
8 Our focus now is from what we think is
9 the science and a sound plan to step forward and try
10 and work on building a -- a better vision now that we
11 have that plan in place. Thank you.
12 THE CHAIRPERSON: Thank you. I want to
13 thank YKDFN for their questions. Before I go to the
14 City of Yellowknife, I just want to quickly acknowledge
15 former Chief for Tuita and also retired from the CBC
16 from the last number of years, but he's -- I think he's
17 pretty well known, Paul Andrew (phonetic). I want to
18 say -- recognize Paul Andrew in the back, there. Mahsi
19 for being here.
20 The next one (1) I'm going to go to, the
21 City of Yellowknife. Is there any questions to the
22 Developer on their presentation?
23 Okay, I think the -- it looks like
24 they're gone. So I'm going to go to -- next on my list
25 is the Review Board technical advisers or staff.

1 MR. ALAN EHRLICH: Thank you, Mr.
2 Chair. There are a number of questions from Review
3 Board staff and technical advisers on this subject. Is
4 it all right with you if we do some from staff, then go
5 to advisers, and -- and possibly head back and forth a
6 little bit?
7 THE CHAIRPERSON: I'm okay with -- if,
8 you know, you guys, the staff, or technical adviser,
9 legal counsel, if you want to do it all together,
10 that's fine.
11 MR. ALAN EHRLICH: Thank you, Mr.
12 Chair. We'll try to keep this focussed on the most
13 important issues at hand.
14 THE CHAIRPERSON: Can you make sure
15 your mic's close, too, so we can hear? I'm -- I'm
16 partly deaf.
17 MR. ALAN EHRLICH: Thank you, Mr.
18 Chair. My first question is an engineering question.
19 And I'd like to address it to Mike Nahir, who is the
20 senior engineer for this project.
21 As an engineer, Mr. Nahir, would you say
22 that it's possible to engineer a structure for forever?
23 THE CHAIRPERSON: Thank you. I'll go
24 to the Developer.
25 MR. MICHAEL NAHIR: Thank you, Mr.

1 Chair. It's Mike Nahir. I'll have to look back on my
2 philosophy class and some of my engineering notes to
3 get some of the theory on that.
4 But all kidding aside, engineers, by
5 practice, don't typically design forever. But what
6 they do do is they design systems that can work to meet
7 the needs of people and the environment through good
8 engineering practice.
9 In this case, and clearly what we're
10 talking about is the design of -- of the containment of
11 the arsenic trioxide dust, and what we've done is
12 developed what we feel to be a very responsible
13 project.
14 In lieu of the best perfect solutions
15 that don't exist yet, we feel that it is our
16 responsibility to develop proper -- by using
17 engineering proper structures and systems to obtain a
18 long-term goal of containment. Our -- our interest is
19 to develop the most sustainable long-term project that
20 we can at this time, recognizing that systems and
21 knowledge and innovation change over time. I hope that
22 helps your question. Thank you.
23 THE CHAIRPERSON: Thank you. I'll go
24 to the Review Board.
25 MR. ALAN EHRLICH: Thank you, Mr.

1 Chair. And -- yeah, and the answer does help, and it
2 explains the approach that -- that the Giant team has
3 taken to deal with the -- the daunting problem that's
4 in front of it.
5 I did ask if it's possible to engineer a
6 structure for forever. You said engineers typically
7 don't. My question wasn't what's typical for an
8 engineer, my question is: What's possible?
9 Is it possible for an engineer to
10 engineer a structure forever?
11 THE CHAIRPERSON: Thank. I'll go to
12 the Developer.
13 MR. MICHAEL NAHIR: Thank you, Mr.
14 Chair. Mike Nahir. The short answer is, no, we can't.
15 We can build systems that last for as long as we need
16 it by -- by continually looking after it and managing
17 it and -- and maintaining it, which is what we've
18 proposed. And that's why we're developing a perpetual
19 care plan.
20 But the -- the short answer is, no, we
21 don't. You know, nobody can. Thank you.
22 THE CHAIRPERSON: Thank you.
23 MR. ALAN EHRLICH: Okay, I -- I
24 appreciate your -- your candour, Mr. Nahir. And -- and
25 I appreciate the short answer where I can give it,

1 although I know that some elaboration is often helpful
2 as well.
3 And you've raised an important point,
4 you know, talking about if best systems -- you know,
5 some best systems may not exist yet. And, of course,
6 the Review Board recognizes that the Developer has
7 committed, on the record, to having an independent peer
8 review panel examine best emerging technologies every
9 ten (10) years after a project implementation.
10 The next question I have for you is, you
11 know, to go with this idea, that the best system may
12 not exist yet, you've thought a lot about engineering
13 solutions to deal with a project like this.
14 How likely do you think it is that a
15 better technical solution will be found in, let's say,
16 the next two hundred (200) years?
17 THE CHAIRPERSON: Thank you. I'll go
18 back to the Developer.
19 MR. MICHAEL NAHIR: Thank you, Mr.
20 Chair. Mike Nahir. Of course, that's -- of course,
21 that is speculation, but -- and I -- and I have to
22 couch that in speculation because I won't be here to
23 ensure that.
24 But having said that, when I think of
25 the state of the world two hundred (200) years ago and

1 the extent of innovation that's occurred since then, I
2 can't help but come to the conclusion that there will
3 very likely be solutions that would apply to this that
4 could be more effe -- more effective or more efficient
5 or ultimately more satisfying to everybody. I would
6 just have to assume that that's the case. Thank you.
7 THE CHAIRPERSON: Thank you. Review
8 Board staff...?
9 MR. ALAN EHRLICH: Thank you, Mr.
10 Nahir. And, yeah, it was your view on that that I was
11 -- I was hoping for. So let's suppose that, you know,
12 in such a case a better solution was found that made
13 good sense for remediation at Giant.
14 Would the Giant team support
15 implementing it?
16 THE CHAIRPERSON: Thank you. And to
17 the Developer.
18 MR. MICHAEL NAHIR: Again, speculative,
19 but I would -- I would assume that the -- for the
20 purposes of -- the value of doing the research and --
21 and looking into innovations that -- that may occur in
22 -- over time that at that time decisions will be made
23 based on the values of the people and -- and what's on
24 the table so to speak.
25 In other words, I -- it's more than

1 likely that within the next two hundred (200) years,
2 just to use your previous example that that could be
3 seen as a worthwhile thing to do. Again, within the
4 context of speculation. Thank you.
5 THE CHAIRPERSON: Okay. Thank you.
6 To Review Board staff...?
7 MR. ALAN EHRLICH: That was -- that was
8 a longer answer and I kind of get it. So if a better
9 solution was found that made sense for the Giant site,
10 would you want them to implement it?
11 THE CHAIRPERSON: Thank you. To the
12 Developer.
13 MR. MICHAEL NAHIR: Thank you, Mr.
14 Chair. Mike Nahir. The -- and I'm trying to be
15 extremely brief. The short answer is yes.
16 The slightly longer answer is that I
17 can't commit personally to that other than to say that,
18 you know, it's obviously going to be based on the logic
19 of what -- of that -- at that time if it makes sense.
20 Thank you.
21 THE CHAIRPERSON: You sound like a
22 politician. I'm going to go back to the Review Board
23 staff.
24 MR. ALAN EHRLICH: Thank you, Mr.
25 Chair. Then I do wish you the good health to live so

1 long and -- and all that, but I -- I --
2 MR. MICHAEL NAHIR: But we are talking
3 about two hundred (200) years, so.
4 MR. ALAN EHRLICH: The -- the point
5 that I'm -- I'm getting towards is one (1) of the
6 themes that's come up with the perpetual care sites and
7 lessons learned that have been put on the record last
8 April is -- is the theme of reversibility and a lot of
9 the evidence from other places that have done a lot
10 more perpetual care with dangerous stuff like France.
11 You know, they -- they point out that reversibility is
12 an important theme. And so I've been -- been trying to
13 think about the project from a -- a perspective of
14 reversibility.
15 Now if one of these better solutions in
16 the -- in the, you know, the kind of future thing we're
17 talking about is found, again, one (1) that makes good
18 sense for the project site, but it requires the removal
19 of frozen arsenic from chambers, you know, if something
20 like that happened, how -- how reversible would you say
21 this project is?
22 THE CHAIRPERSON: Thank you. I'm
23 going to go to the Developer.
24 MR. MICHAEL NAHIR: Thank you, Mr.
25 Chair. It's Mike Nahir. Two (2) -- two (2) quick

1 points and I might -- and then I can give you, if you
2 desire, a slightly more technical answer and I'll --
3 and I'll ask Daryl Hockley to speak to that.
4 But first, I want to say that through
5 the -- our work and through the Information Requests,
6 we've heard the interest in reversibility so that was -
7 - that was clearly articulated by parties, so we
8 understood that, we've heard that.
9 And -- and interestingly enough, I think
10 we've built -- put some effort into that a little bit
11 in the -- in the freeze optimization study. So we
12 thought a bit about that in some respects. And that --
13 and the second point I wanted to say is that it -- it
14 was important for us that in the design to meet a long-
15 term objective, and as Daryl mentioned yesterday or
16 today, that we really wanted to be responsible and do
17 the right thing in terms of engineering solutions to
18 build robust solutions. We were very interested in
19 meeting the -- a robust solution this way, which in
20 some ways count -- counters a little bit the idea of
21 reversibility, because if it's very reversible then it
22 might not be as robust.
23 Having said that, we put a little bit of
24 thought into that -- into the freeze optimization
25 study. I know this is a longer answer here, but -- but

1 we -- we're -- we thought a bit about that and -- and
2 I'm going to now ask Daryl to speak a little bit to the
3 tech -- a bit more of the tech -- technical side of
4 that if that's okay.
5 THE CHAIRPERSON: He doesn't want to
6 speak?
7 MR. DARYL HOCKLEY: Dar -- Daryl
8 Hockley. I don't really think that I have to much to
9 add. Maybe pro -- proceed with the questions. If we
10 want to get back to the details, we can still do that.
11 THE CHAIRPERSON: Okay, thank you. I'm
12 going to go back to the Review Board staff.
13 MR. ALAN EHRLICH: Okay, thank you. I
14 have a more specific engineering question for Daryl, or
15 Mike, whichever -- whoever.
16 So considering the reversibility idea,
17 could you briefly, and I mean like just a few minutes
18 max, characterise the wetted versus non-wetted
19 alternatives? I know that the proposed project is for
20 wetted, but you've also identified that there's the
21 possibility of a non-wetted chambers in this.
22 So from the perspective of reverse --
23 reversibility, can you talk a bit about the pros and
24 cons of each? But -- I mean, you know, try and keep it
25 fairly short, please.

1 THE CHAIRPERSON: Thank you. To the
2 Developer.
3
4 (BRIEF PAUSE)
5
6 MR. DARYL HOCKLEY: Dar -- Daryl
7 Hockley again, Mr. Chair. The -- in -- in the -- in
8 the briefest terms the -- a dry block or a wet block
9 would -- would each have challenges that would have to
10 be worked out by -- by future engineers.
11 The -- in -- in theory, I think one
12 could conclude the -- the dry block would be easier
13 only because there's less water involved, but the --
14 the reason we -- I wouldn't want to just say that
15 categorically is that it would depend on why we were
16 reversing the -- the blocks.
17 If we were, for example, reversing the
18 blocks so we could use water to take them out of the
19 ground, it might be better to have water in there
20 already. So I -- I don't want to give you a simple
21 statement to that. It's -- I don't actually see a huge
22 difference either way. If anything I guess the -- the
23 dryer block is -- is, in theory, at least more
24 reversible than the -- than the wetter block, but...
25 THE CHAIRPERSON: Thank you. Review

1 Board staff...?

2 MR. ALAN EHRLICH: Thanks, Daryl. My

3 recollection from the technical session of October 2011

4 was that the Developer suggested that a frozen block

5 would be easier to reverse because the technology for

6 mining ice is simpler than the technology for mining a

7 fine powder.

8 It sounds like there's been more

9 thinking on that since then, or -- or was that an

10 erroneous conclusion at the time, or could you just

11 contrast that with -- with what you just said, please?

12 THE CHAIRPERSON: Thank you. I'll go

13 back to the Developer.

14 MR. DARYL HOCKLEY: It's -- it's a

15 frozen block in any circumstance, and the -- really our

16 definitive thinking on this is in a fairly lengthy IR,

17 which I'm sure you're aware of, that -- that does talk

18 in detail about how one would extract the dust if one

19 decided to do that in future.

20 And the only method that we can

21 speculate on, and maybe we should stop speculating,

22 we're trying to be helpful, but we have to stop

23 speculating. The only method that you could begin to

24 take that out of the ground is a wet method, in which

25 case the first thing we'd do is add water to it

1 regardless of whether it started wet or dry.
2 THE CHAIRPERSON: Thank you. Review
3 Board staff...?
4 MR. ALAN EHRLICH: Okay. Thanks for
5 that. Now, I'm going to go back to the less technical
6 subject that we were on before which had to do with the
7 potential for innovations in the future.
8 You've already made that commitment to
9 have the independent panel look at emerging
10 technologies every ten (10) years, and parties have
11 described that need to keep up with emerging
12 technologies in the -- you know, in the future as being
13 very important to them.
14 The parties have also said that it's
15 important to them that you help facilitate an active
16 search for emerging parties that could help with
17 remediation around the mine. So here's something. I'm
18 fishing for a commitment here, okay, and I -- I don't
19 know if I'll get it or not, but I want to put it out
20 there and be fairly clear about what I'm doing.
21 I was wondering if the Developer would
22 be willing to commit to invest one half (1/2) of 1
23 percent of the whole implementation cost, not the
24 ongoing cost, just the implementation cost, to some
25 kind of a trust fund that could be accessed

1 periodically only after implementation is complete, so
2 no ones getting at it for awhile, so the money has a
3 long time to grow which is why it doesn't need to be a
4 huge amount upfront, but the point would be to
5 facilitate an active search and research into emerging
6 technologies, and that could include the cost of your
7 periodic reviews of emerging technologies with your
8 independent peer review panel which are committed to
9 every ten (10) years for as long as the project lasts
10 anyway.
11 You know, part of it -- you know, I
12 figure if it's a small enough amount of seed at the
13 beginning and people don't really need to get at it for
14 a while, because you hope to get emerging technologies,
15 so looking at next week won't really help anyone. I --
16 I'm trying to find some kind of common ground that --
17 that would -- would help parties move forward with --
18 with what you've proposed there.
19 And so I -- I wonder -- Joanna, you're
20 clearly the best person to respond to something like
21 this. But how -- is the Developer willing to commit to
22 something like that, using a half (1/2) of 1 percent of
23 your total implementation costs?
24 THE CHAIRPERSON: Okay, before I go to
25 the Developer, I'm just thinking, I hope you could

1 answer that. And, you know, I like to dance, too, but
2 I'd like you to get to the point.
3 MS. JOANNA ANKERSMIT: Thank you, Mr.
4 Chair. Joanna Ankersmit. I had a feeling Alan was
5 asking that question to me since he was staring at me
6 while he was asking it. But -- so the -- you're
7 looking for a specific commitment from the project to
8 invest half (1/2) a -- I -- I'm not sure what the
9 number was, sorry, I didn't write it down.
10 But I think what's important here is
11 that -- I think I mentioned this at the public session
12 and the community session. I hear you on research. I
13 do. And -- and the project team does. It's not within
14 the mandate of this project to take money and put it
15 aside to look right now at finding a new solution to
16 this problem.
17 The project we proposed, we've proposed
18 because we have done the research. We've looked at
19 what's available and it's the best solution for right
20 now. That doesn't mean that in the future that can't
21 be revisited. But right now, what this project has a
22 mandate for is to implement the project that is before
23 us. It would be irresponsible for me to make -- or to
24 try to make a commitment that is outside the scope or
25 the mandate of what this project currently has.

1 THE CHAIRPERSON: Okay. Thank you.
2 I'll go back to the Review Board staff.
3 MR. ALAN EHRLICH: Thank -- thanks,
4 Joanna. And that -- you know, that was very clear and
5 everything like that. I think part of what I've heard
6 from the Developer in the hearing and in the previous
7 time is that one (1) of the things that's very
8 important to getting the project done right is to have
9 the trust of the communities it's around, and -- and
10 this includes over time, and to address the concerns of
11 the communities and -- and the parties that have
12 participated.
13 And so I was thinking about this more in
14 line of addressing a concern that you have heard quite
15 broadly from a number of different groups and
16 individuals, even over the last few days.
17 In that context, do you have any
18 flexibility?
19 THE CHAIRPERSON: Thank you, I'll go to
20 the Developer.
21 MS. JOANNA ANKERSMIT: I'm always
22 flexible. Joanna Ankersmit. I think we're going to
23 talk about tomorrow. This -- this is something that's
24 come up in the working group that's been looking at
25 monitoring and advisory functions for the project. So

1 I think that perhaps tomorrow would be a better time to
2 discuss it. And I -- and I don't want to seem
3 intransigent on this issue, because I'm not. And I
4 don't think the project team is trying to be, and I
5 hope that people aren't perceiving us as being that.
6 So I think how you do that -- Daryl made
7 an important comment the other day that there's -- it's
8 very complex. Throwing a little bit of money at this
9 is probably not going to get us a new solution to this
10 very challenging, complex, and -- and somewhat unique
11 problem.
12 So we have to look around at what
13 research is going on around the world, what mining
14 companies that are out there innovating these processes
15 all the time are already doing. To think that we can
16 throw a little bit of money, as you -- as you've
17 somewhat suggested, and it will magically create a sol
18 -- a new solution to this problem, I don't think is
19 where we should be leading people. And I don't believe
20 that that's -- I don't believe it's -- it's a way that
21 we want to go.
22 We have a good program. We have a
23 solution that will last a very long time. I firmly
24 believe that this project will make the environment
25 safe. I'm not opposed to research, I'm just not sure

1 that we -- that -- that throwing a little bit of money
2 at this problem is going to get us much further.
3 THE CHAIRPERSON: Thank you. I'll go
4 to Review Board staff.
5 MR. ALAN EHRLICH: Thanks very much,
6 Joanna. And just to be clear, I said it's a little bit
7 of money now. It would be a lot more than a little bit
8 of money over time as time builds up. But I -- I don't
9 want to push that any further.
10 I've been trying to understand the
11 terminology with regard to your perpetual care plan.
12 But a lot of the discussion is also about long term.
13 Terms, even long terms, have a beginning and an end,
14 and perpetuity doesn't.
15 You agree I got that part right?
16 THE CHAIRPERSON: I'll go back to the
17 Developer.
18
19 (BRIEF PAUSE)
20
21 MS. JOANNA ANKERSMIT: Joanna
22 Ankersmit. Yeah.
23 MR. ALAN EHRLICH: Thank you. And on a
24 totally unrelated -- the briefest answer ever. Sorry,
25 Mr. Chair. With your permission. You know, part of --

one (1) of the things we've realized from looking at the perpetual care studies is that there are decisions to be made about when the costs and risks are borne and by who over time. And that's part of what we've heard in the hearing, as well.

So try and understand the -- the cost versus risk. The initial cost of the project when it was referred to us in 2008 was substantially lower than in 2010 when we had the Developer's assessment report because you had done more work and find out more of what's going on. Since that time, you've done a freeze optimization study, and done a lot more work, as well.

Can you please describe what is the current implementation costs for the project and what is the current estimated annual maintenance and monitoring costs for the -- you know, the long haul after everything's frozen?

I'm asking because I just want to be sure the information we have in the Developer's assessment report is not stale now at the time the Board is -- is approaching decision making.

THE CHAIRPERSON: Thank you. I'll go back to the Developer.

(BRIEF PAUSE)

1 MS. JOANNA ANKERSMIT: Just one (1)
2 second, Mr. Chair. I don't -- I don't trust my own
3 memory. So I just want to take a look at what we
4 provided in the IR as the most recent.
5 MR. ALAN EHRLICH: Mr. Chair, if it's
6 all right, I mean, even the IR was a while ago, would
7 it be okay if tomorrow perhaps you brought in the --
8 that answer? I don't need it today especially.
9 Tomorrow's got financial stuff in it.
10 MS. JOANNA ANKERSMIT: It doesn't sound
11 like a complicat -- a complicated question, but it is
12 because a lot of numbers get thrown around in this
13 project, and how they are calculated, what they are
14 calculated for has an impact. And so the reason you're
15 -- you're seeing my caution related to throwing numbers
16 out there is that different numbers are developed over
17 time for different purposes.
18 That isn't to be misleading. It's just
19 the way a project of this nature... So there's a
20 public -- the Government of Canada posts its
21 liabilities, and that's available on the internet. We
22 also have implementation costs that develop over time.
23 I think perhaps what you're getting at
24 is there's a substantive investment that will be
25 required for the implementation. And then the long-

1 term costs are currently estimated at $1.9 million
2 annually, I believe, and I can confirm that number,
3 but... There, I just did it. I threw out a number
4 without checking, but...
5 So it's a substantial investment now.
6 And that will be very capital intensive. And then once
7 the freeze takes place and once the remediation project
8 is implemented, then we will see a sharp decline into a
9 far more -- a far lower maintenance number over time.
10 THE CHAIRPERSON: Thank you. Before I
11 go back to the Review Board staff, I'm just going to
12 ask the question to the staff. That the questions that
13 you're asking, tomorrow we're going to be doing the
14 presenta -- or they're going to be doing a presentation
15 on oversight and consultation and long-term funding.
16 Some of your questions that are related
17 to that, can we put that off until tomorrow if you have
18 a list of questions there?
19 MR. ALAN EHRLICH: Absolutely, Mr.
20 Chair. And I'll respectfully ask the Developer to come
21 tomorrow with the current estimated cost for the
22 project, as well as a current updated annual cost. I -
23 - just because I know that -- I just say it's
24 complicated. I don't expect you to produce it on the
25 spot but, Mr. Chair, I will -- I will carry on then.

1 Two (2) other questions from staff, and then we've got
2 questions from the -- the experts.
3 In your presentation, you recognized
4 that there are good lessons to be learned from other
5 places, and Joanna, you're -- you're off the hook now,
6 if you want to be, because those are the -- those are
7 the big policy type questions I had. These are a
8 little more detailed. But -- but you're welcome to
9 stay -- stay near the mic if you prefer.
10 MS. JOANNA ANKERSMIT: I do sometimes
11 have more than policy to offer --
12 MR. ALAN EHRLICH: Okay.
13 MS. JOANNA ANKERSMIT: -- but I -- I
14 will step back so I don't interfere with the real
15 knowledge at the table.
16 MR. ALAN EHRLICH: Thank you. In terms
17 of lessons learned from other places, these lessons
18 learned have been on the public registry in at least in
19 terms of the Kuyek (phonetic) paper, which is, you
20 know, a remarkably thorough study of case studies from
21 a variety of different places, places that have a lot
22 of experience dealing with perpetual care for hazardous
23 substances.
24 Those have been on the record since July
25 20th, 2012, over a year ago, and the Review Board's

1 been asking questions having to do with perpetuity,
2 perpetual care type stuff, every since the deficiency
3 statement, which was a lot earlier than that.
4 Yet what we're hearing in your
5 presentation is that you still don't have a plan for
6 best communication practices for long-term sites.
7 You're going to do it later. Exploring innovative
8 techniques for records management, you'll do later.
9 Involving stakeholders in scenario analyses, you'll do
10 it later.
11 The Board's been showing that it's quite
12 interested in this stuff for a long time. All these
13 lessons learned have been on the record for a long
14 time. We've encouraged in the technical sessions last
15 October to try and get going on that, and we're still
16 hearing that it hasn't happened.
17 I was just wondering if you could
18 explain why that information isn't ready to go at this
19 point in the environmental assessment.
20 THE CHAIRPERSON: Thank you. To the
21 Developer.
22 MR. ADRIAN PARADIS: Adrian Paradis on
23 behalf of the project team. Maybe I -- I maybe I not
24 properly explained myself and that is an apparently
25 inherent flaw with my -- with myself. My wife -- my --

1 my wife, she keeps telling me that, that I need to
2 better explain, more coherently describe my thoughts.
3 Our intention has been, and we've always
4 been working towards stabilizing the site. It's not
5 that we've been remiss, or we are downplaying the --
6 the concerns about the -- the Board and the parties.
7 It's our plans have been towards developing a strategy
8 and a plan that implements the physical -- the physical
9 structure, and making sure that it is robust. That is
10 where our focus has been.
11 That long-term planning for transition,
12 for what the site -- future site could look like, those
13 are evolving discussions involving planning, and we are
14 only one half (1/2) of it. We can develop the science,
15 and I think you've heard a lot of this over the last
16 couple of days.
17 The science takes time. Good science to
18 make good decisions. To make good policy decisions
19 takes time. A lot of the research we've had to date
20 generates new questions. Those new questions need to
21 be then understood by us, and then try to be
22 communicated.
23 And I think Danny has highlighted onto
24 it a lot; that our communications, at times, fails.
25 It's -- and it's not intentional, it's just we are

1 relaying a very complex site with a long legacy to a
2 very large community, and it takes time to figure out
3 what we get from the science, to bring it to an
4 understanding where we can then communicate it
5 correctly to parties.
6 At times across cultural divides, and
7 across times with a long history. It takes time. And
8 it's not the answer, I think, you're looking for but I
9 think it's at the heart of the matter, so. Thank you.
10 THE CHAIRPERSON: Thank you. Review
11 Board staff...?
12 MR. ALAN EHRLICH: Thank you. This is
13 the -- the final question from the Review Board staff.
14 And, by the way, I would like to point out to your wife
15 and everyone else that I think you shared that very
16 well.
17 We understand your position on that and
18 it's hard for us guys to be so communicative, but we
19 try.
20 MR. ADRIAN PARADIS: I'll try not to
21 grunt.
22 MR. ALAN EHRLICH: I think my wife
23 wishes I would be quiet more. All right. So the last
24 point that I want to ask a question about here is, you
25 know, we've seen quite a reliance in this last

1 presentation on adaptive management and adaptive
2 management is going to be applied in many parts of this
3 project.
4 In the past I've seen adaptive
5 management used in various other EAs, sometimes very
6 appropriately and sometimes as a blank cheque to get
7 out of whatever trouble might come up. We don't have
8 good predictions, but don't worry, we'll manage
9 adaptively, whatever comes up we'll deal with it and
10 sometimes that's true for some things you can learn and
11 deal with and for other things they're harder to learn
12 and deal with because they don't have good work-
13 arounds.
14 I was asked by the environmental working
15 -- the Giant Mine environmental working group to give
16 some specifics on when it's appropriate and when it's
17 not to do adaptive management. And so for your meeting
18 of, I think it was April 11th this year, I -- I passed
19 on a document that had been prepared for Department of
20 Fisheries and Oceans by Lorne Greig, David Marmorek,
21 and Carol Murray of ESSA Technologies and Consulting
22 Company called the Guide for Preparation of Adaptive
23 Management Plans.
24 They wrote that in -- in March 2008, but
25 it's a good guide. And the point that I tried to make

1 there is adaptive management is a great tool for
2 dealing with surprises. In some cases, it's not a
3 great tool if the thing changes so slowly it's hard to
4 notice, if there are too many variables to figure out
5 what's going on, if there's a lot of background noise,
6 if it isn't a question of uncertainty, or if the
7 impacts are unacceptable or irreversible.
8 The way I paraphrase that is -- and you
9 can't use adaptive management to -- to cover -- to --
10 to place bets you can't afford to -- to cover, right.
11 All right. There's a -- a very short part of this that
12 I described to the working group.
13 I'm going to quickly get it out and just
14 ask, you know, if -- if you agree that you're using
15 adaptive management in this way. The authors that I
16 just described said:
17 "It's erroneous to expect that
18 adaptive management's a tool that
19 will prevent unwanted ecosystem
20 changes from development projects.
21 Even in the right management context,
22 adaptive management is not
23 appropriate in situations where
24 impacts are likely to be unacceptable
25 or irreversible. Management actions

1 that are subject to adaptive
2 management should be reversible and
3 practical irreversibility is a
4 characteristic of most development
5 projects. Adaptive management may be
6 useful for trying to find the most
7 effective mitigation measures for
8 impacts that do occur, but it must be
9 remembered adaptive management's a
10 tool for learning how the system
11 responds to our actions and we may
12 learn that none of the feasible
13 mitigation measures will be
14 sufficient to render the impacts
15 insignificant."
16 So there are some kinds of things that
17 adaptive management is good for; some kinds of things
18 they aren't. How have you guys considered that when
19 you talk about your use of adaptive management in this
20 project.
21 MR. ADRIAN PARADIS: Adrian Paradis on
22 behalf of the project. If you give us a quick moment
23 there was a lot in there and I want to be able to give
24 you a -- we just had my conversation on my coherency.
25 MR. ALAN EHRLICH: If I -- if I may,

1 Mr. Chair, and if it helps, that exact document was
2 distributed by your group, sent by Erika Nyyssonen, you
3 know, in -- in April as well as going through it in
4 person.
5 So I -- and -- and I know many of the
6 people who are here, including the Developer and other
7 parties completely remember that we did walk through
8 that in baby steps. So I hope it doesn't come as a
9 surprise to anyone here.
10 MR. ADRIAN PARADIS: Hopefully it
11 doesn't. I'm un -- I'm -- unfortunately I was not part
12 of that meeting so I'm just going to caucus briefly and
13 we'll respond.
14 THE CHAIRPERSON: Okay. Well, you can
15 caucus, we'll come back in five (5) minutes.
16
17 --- Upon recessing at 2:20 p.m.
18 --- Upon resuming at 2:36 p.m.
19
20 THE CHAIRPERSON: We're just waiting --
21 everybody here? Everybody's too serious in here.
22 Before I turn it over to my technical adviser, I just
23 want to just make a little comment here. I guess a
24 little humourous comment.
25 I want to say that I -- I have a really

1 good friend, his name is George Tucker. And one (1)
2 time we were going for coffee and this young guy came
3 up to him and he said to him -- he said, George, I
4 heard you're -- you do medicine. He said, I heard you
5 were well respected. He says, well, I play with it
6 every now and then. He says, well, you know what? He
7 says, I want you to help me with my hearing.
8 So he grabbed his head and shaked him
9 and starting chanting and all of a sudden he said,
10 how's you're hearing. And he said, oh, he said my
11 hearing's always been good, but my court hearing is
12 tomorrow, he said.
13 Anyways, I'm going to go over to my --
14 my hearing's not that good anyway. I'm going to go to
15 my Review Board technical advisers.
16 DR. FRANCO OBONI: Thank you, Mr.
17 Chair. Frank Oboni speaking. I will read you a phrase
18 from the Giant Mine action item 21, consideration of
19 perpetual care risk in prior GMRP reports. The phrase
20 goes like this:
21 "The probability of the complete
22 collapse of governance was assumed to
23 be zero point zero five (0.05) or
24 1:2000, based on the record of near
25 continuous civil governance of

1 western societies for the last two
2 (2) millennia."
3 Now bear with me for a second. You know
4 about the Roman empire, do you? Maybe you remember
5 that Rome was sacked by the Visigoth sixteen hundred
6 (1,600) years ago. After that, centuries of barbarian
7 invasion went on, until maybe, let's say 14th century,
8 which would be six (6) -- six hundred (600) years ago,
9 the Renaissance came up.
10 So now we have for a very simple case, a
11 1:600 probability, instead of 1:2000 probability.
12 Based on these type of discrepancies on simple, basic
13 facts, would you still consider that your risk
14 assessment for long term is so positive as you stated
15 earlier? Thank you.
16 THE CHAIRPERSON: Thank you, I'm going
17 to go to the Developer to the question.
18
19 (BRIEF PAUSE)
20
21 MR. MICHAEL NAHIR: Thank -- thank you,
22 Mr. Chair. Mike Nahir. Could -- could we receive some
23 clarification on the document that you're quoting,
24 please? Thank you.
25 THE CHAIRPERSON: Thank you.

1 DR. FRANCO OBONI: Absolutely. It is
2 the report that you actually gave me the other day.
3 Action item 21, consideration of perpetual care risk in
4 prior GMRP reports. It's dated August 10th, 2012, page
5 2, first paragraph.
6 MR. MICHAEL NAHIR: Mr. Chair, if you
7 could just give us a second to find it, please? Thank
8 you.
9
10 (BRIEF PAUSE)
11
12 MR. DARYL HOCKLEY: Thank you, Mr.
13 Chairman. Daryl Hockley. I've -- I do have a copy of
14 that one. It -- for starters, I think, I'd like to
15 point out that it says -- just to give the rest of you
16 some of the context in here -- here, it says:
17 "In June, 2012, workshop with the
18 parties, the subject of perpetual
19 care was discussed at length.
20 Beclame -- Became clear that the
21 parties had found a number of
22 advances in perpetual-care
23 philosophy, specifically, the
24 oversight management of perpetual-
25 care projects in documents and case

1 industries -- case histories from
2 other industries.
3 The Developer's technical advisor
4 commented that mine closure world had
5 also been the source of some
6 innovative thinking about perpetual
7 care, and, in fact, previous work on
8 the Giant Mine remediation project
9 had been a leader in some instances.
10 An example was given of the methods
11 used to consider perpetual-care risks
12 in the selection of an arsenic
13 trioxide management alternative."
14 I'll stop quoting verbatim here. It
15 then goes on to provide the document Mr. -- Dr. Oboni
16 is referring to. It -- it actually is supporting
17 Document 18 from a report that was first issued in
18 December, 2002, and it was filed purely as an example
19 of ways that the project has looked at these issues in
20 the past. It by no means constitutes in any way, shape
21 or form the total of this group's thinking about --
22 about the long-term.
23 THE CHAIRPERSON: Thank you. I'll go
24 back to the Review Board technical advisor.
25 MR. ALAN EHRLICH: Mr. Chair, it's Alan

1 Ehrlich, for the Board. Just to provide context for
2 this comment on slide 15 of the Developer's
3 presentation, under the scenario analysis the Developer
4 talked a bit about how scenarios:
5 "Like a complete collapse of
6 government were included in
7 assessment of options by the project
8 team."
9 And so we've looked around where that
10 was included. And in the DAR, where we asked, you
11 know, what would it take for the thermosyphons to fail,
12 you list a chain of events and say, you know, this
13 includes unlikely things that would require a full
14 collapse of civil society. So in -- I think it was in
15 the technical sessions we said, Well, yeah, you want
16 this to go on for a long time.
17 So where you -- you've presented the --
18 you did consider a complete collapse of government in
19 the assessment, this is the only spot that we are able
20 to locate any reference to that, was back in 2002. And
21 it has -- you know, we wanted the clarifications that
22 Dr. Oboni just asked for, that's the context that we're
23 raising it here, is from that -- that point in your
24 slide. Thank you.
25 THE CHAIRPERSON: I'm going to go to

1 the Developer.

2 MR. DARYL HOCKLEY: That's correct.

3 And nonetheless, it's a twelve (12) year-old report.

4 And we've done a lot of thinking about the long-term,

5 and I -- I don't think -- I don't think arguments about

6 Roman history helps us here today. The -- the fact of

7 the matter is that -- and -- and, as I did explain at

8 length on Monday or Tuesday, we avoided -- specifically

9 avoided trying to picture a particular scenario. That

10 we evaluated eight (8) or twelve (12) options, I'm not

11 sure how many it was at the time, against the case that

12 there was a collapse of governance for whatever reason,

13 we -- we specifically avoided selecting a specific

14 scenario.

15 My -- my recollection further is that

16 the -- the frozen block method was the most robust of -

17 - of the ones that were analyzed in there. So whether

18 -- whether we -- whether that is a one (1) in six

19 hundred (600) or a one (1) in two thousand (2,000), or

20 if we wanted to take some other entities, some other

21 range of time, I -- I don't think it will markedly

22 change the outcome of that assessment. I don't

23 necessarily want to say that definitively, because it

24 is twelve (12) years ago that we did that assessment,

25 but -- or ten (10) years ago, pardon me, so.

1 DR. FRANCO OBONI: Well, since we are
2 exchanging point of views, I think that using
3 probabilities that are blatantly wrong in a risk
4 assessment, and then claiming that everything is under
5 control from a risk point of view is not really the
6 optimum course.
7 But let's change the subject yet. Could
8 you -- I'm referring now to your -- to the Golder's
9 report, the risk assessment, the official risk
10 assessment for the project. Could you please comment
11 on what is a credible event.
12 THE CHAIRPERSON: Thank you. I'll go
13 to the Developer.
14 MR. JOHN HULL: John Hull, Mr.
15 Chairman. The project team had a team of exer --
16 experts together to define credible events that were
17 site specific and likely to -- to potentially occur.
18 DR. FRANCO OBONI: Is that a credible
19 event associated with the probability?
20 THE CHAIRPERSON: Thank you; to the
21 Developer.
22 MR. JOHN HULL: Mr. Chair. John Hull.
23 It was a quantitative evaluation and -- based on site
24 experience -- qualitative, sorry.
25 DR. FRANCO OBONI: Sorry, I didn't

1 hear. Did you say quantitative or qualitative?
2 MR. JOHN HULL: Mr. Chair, qualitative.
3 DR. FRANCO OBONI: Qualitative. Do you
4 think that censoring the possible scenarios on a risk
5 assessment is a fair practice? "Censoring" means
6 cutting away extremes.
7 THE CHAIRPERSON: Developer?
8 MR. MICHAEL NAHIR: Thank you, Mr.
9 Chair. It's Mike Nahir. We're -- we're just not clear
10 on the question. I am not sure. Can you describe what
11 you mean by that? Thank you.
12 DR. FRANCO OBONI: Thank you, Mr.
13 Chair. If you start a risk assessment by looking only
14 at credible events and are quoting word by word, with
15 the reasonable probability of occurrence you are
16 cutting away all sorts of events that could happen in
17 the future. I don't think, for example, that a event
18 like Fukushima would have been considered a credible
19 and reasonable event, with a reasonable probability of
20 occurrence at the time the -- the power plant was
21 built.
22 THE CHAIRPERSON: To the Developer?
23
24 (BRIEF PAUSE)
25

1 MR. MICHAEL NAHIR: Thank you, Mr.
2 Chair -- Mr. Chairman. It's Mike Nahir. I think the -
3 - I think the line of questioning is -- is leading us
4 into a detailed discussion about elements of risk
5 assessment in -- in a -- in a sort of in a pathway or
6 in an approach that we haven't taken. I -- I just want
7 to describe a little bit our risk process that we've
8 used, and maybe that will allow the Board to better
9 understand how we've come about this.
10 The Aboriginal Affairs program has a
11 risk assessment methodology. We have a full program
12 that we apply to all contaminated sites, including mine
13 sites across the North, that is built based on a
14 standard that is very well known and used in -- in
15 practice. It's a quantitative risk assessment --
16 MR. DARYL HOCKLEY: Qualitative.
17 MR. MICHAEL NAHIR: Sorry, I got caught
18 in the same -- it's a qualitative risk assessment.
19 Qualitative, meaning that it's not numerical to start
20 with. It is based on words and scenarios and types of
21 risks that are descriptive rather than using numbers.
22 That allows us to consider risks that are not just
23 numerically based through human risk assess -- and
24 ecological risk assessment and that sort of thing, but
25 allows us to consider things like impacts to -- to

1 communities, First Nations, and -- and others, as --
2 among other types of impacts.
3 We then use that approach, and we've
4 applied that approach consistently on the Giant -- or,
5 at the Giant Mine, including in -- in response to the
6 Information Request that looks at failure modes, et
7 cetera. And we use that in order to highlight areas
8 where we feel using the precautionary principle that
9 risks are identified and that further study may be
10 required.
11 And I want to point out, Mr. Chair, that
12 we've done extensive human health and ecological risk
13 assessment at the site. We've -- we started in 2001,
14 reviewed again in 2003, 2006, and -- and did an update
15 in 2010; all reviewed by Health Canada, the Department
16 of Fisheries and Oceans, Environment Canada.
17 So this -- this is the approach that
18 we've used to risk assessment. I -- I'm not sure it's
19 going to benefit the Board, maybe it will, I don't
20 know. I'm not -- I don't want to speak for the Board,
21 but we're not in position really to have a detailed
22 discussion about, you know, very specific elements in a
23 very technical fashion about risk assessment.
24 I -- I believe we've presented our --
25 our project with the risk assessments that we've

1 provided, and based on the assumptions and the
2 scenarios and the impacts and the probabilities that we
3 -- we feel are appropriate and representative. And as
4 I said, they are a standard that we apply across the
5 Board. It -- we didn't pull it out of thin air. It's
6 based on industry standard.
7 And so I feel it's appropriate -- you
8 know, whether we want to debate very specifics about
9 all -- you know, historical -- you know, one (1) in six
10 hundred (600), or one (1) in two thousand (2,000), I'm
11 -- I'm just not sure it's going to benefit the
12 discussion. It -- as -- as Daryl was saying, I -- I
13 don't want to put words in the mouth of anybody, but
14 we're -- we're not really in a position to have a very
15 detailed discussion about that, other than to say that
16 we've presented the information that we have. Thank
17 you.
18 DR. FRANCO OBONI: Thank you, Mr.
19 Chair. Well, it is not my intention to drill into
20 details. Because, believe me, if I were to drill into
21 details we would have a different type of discussion
22 even. I'm trying to -- to establish the credibility of
23 this risk assessment, and I think that that's more than
24 necessary at this point.
25 And maybe -- maybe I'm confused and you

1 will clarify the situation for me, but if I look at
2 INAC Risk Management Approach, I read that the test
3 include an evaluation of risks which defines which
4 risks are acceptable, and this point includes the fact
5 that risks are evaluated relative to the risk tolerance
6 of the organization. And furthermore, I read that the
7 ALARP -- ALARP is an acronym used in risk management
8 which stands for 'as low as reasonably practical' --
9 should be applied.
10 Now -- and enlighten me if I'm wrong. I
11 don't think an acceptability threshold has been
12 established. I don't think that the organization has
13 been defined for this project, because it seems to me
14 that the organization in this case should include also
15 the people. And the ALARP, which is an exquisitely
16 numerical value, has not been either defined nor seeked
17 (sic). And now I'm not a toxicologist, but I don't
18 think the ALARP thresholds, or the ALARP criteria, is
19 applied in the toxicological risk assessment either.
20 But I mean -- again, there I'm going into an area which
21 is not my specialty, so.
22 THE CHAIRPERSON: Thank you. We'll go
23 to the Developer.
24 MR. DARYL HOCKLEY: I think the -- the
25 best way to establish credibility of our -- of INAC's

1 risk management system for the purposes of the Board's
2 review is to say that it -- it was developed in
3 consultation with Deloitte Canada who does risk
4 assessment for probably hundreds of -- of government
5 and -- and corporate entities. That it meets the
6 standards of ISO 31000. In fact, ISO 31000 is an
7 international standard for risk manage -- risk
8 assessment that was developed after INAC had its
9 program. And -- and its program, in my opinion, meets
10 -- meets those -- meets those standards.
11 Furthermore, the results of the risk
12 assessment were reviewed and -- I should say, risk
13 assessments because there's a number of them. They
14 were reviewed by an independent peer review panel that
15 included some of Canada's leading experts in each of
16 the types of risk involved: hydrologic risk, rock
17 mechanical risk, human health risk, risks to indigenous
18 -- risk to First Nations from foodstuffs. Some of the
19 wor -- some of Canada's leading experts were on the
20 independent peer review panel that reviewed that work.
21 We can continue to debate the system,
22 the methods; my suggestion is if the -- if the Board's
23 -- if the Board's expert has come to a particular risk
24 that he feels is underestimated, it will be more
25 productive to discuss that than to discuss

1 methodologies.
2 THE CHAIRPERSON: I'll go back to the
3 Review Board technical advisor.
4
5 (BRIEF PAUSE)
6
7 DR. FRANCO OBONI: Well, I think that
8 I'm not in agreement. I'm not trying to discuss
9 methodology here. I am trying to discuss the
10 credibility of the whole way of doing (sic) that was
11 applied to this project.
12 For example, again I quote INAC. INAC
13 says that:
14 "Consequence -- consequences of the
15 potential realization of a risk that
16 should be considered go to human
17 health and safety, legal obligations,
18 environmental impacts, special
19 considerations, including impacts on
20 traditional land use, community,
21 media, and reputation, and, finally,
22 cost."
23 If I go back to the report, the risk
24 assessment report, I see public safety, environment,
25 and cost. There are least three (3) categories of

1 consequences that have gone away.
2 I have heard, like anybody else, during
3 these hearings and in the evenings inhabitants
4 complaining about their impacts and their health. Now,
5 there are methods that model or help evaluate
6 consequences on people in a risk assessment. They are
7 not developed yesterday.
8 I am going to quote one (1)
9 specifically, which is called -- which was developed by
10 Holmes and Rahe, dates back of 1967, that allows to
11 evaluate the changes of disease due to stress because
12 of life changes. I am wondering why human health in a
13 broad spectrum has not be brought in as a consequence
14 in this risk assessment.
15 THE CHAIRPERSON: Thank you. I'm going
16 to go to the Developer.
17 MR. DARYL HOCKLEY: Thank you, Mr.
18 Chairman. The only reason is that there is a
19 completely separate document on human health effects
20 that has been on the registry for I think four (4)
21 years now or five (5) years, been in the -- on the --
22 been in the public domain for five (5) years. It -- it
23 is an exhaustive account of the possible human health
24 effects of this project.
25 And it is -- it -- it includes --

1 amongst other things, it in -- it includes -- or has --
2 was based on discussions with First Nations about what
3 sorts of foods they really eat, and how much they --
4 they really eat around here. It was -- included
5 discussions with people about how much supermarket
6 foods they eat, as opposed to traditional foods. It
7 included discussions about where people get their water
8 right here in Yellowknife and in Dettah, N'Dilo, and
9 Latham Island and others. It's a highly site-specific
10 document.
11 It -- it involved -- this is the short
12 form of it, to be quite honest. The -- the long form
13 is about that much work.
14 And, once again, it was reviewed by an
15 independent peer review panel. One (1) of the key
16 members of that panel was Dr. Laurie Chan, who I
17 mentioned the other day, one (1) of the world's leading
18 experts in the effect of contaminants on indigenous
19 foods, on First Nations foods. He, in fact, was
20 nominated to the Review Board by the Yellowknives Dene.
21 So we think we've done as much as
22 possibly can be done on human health risk assessments.
23 It was in this document, the document that Dr. Oboni is
24 referring to, is -- is a different document intended to
25 look at a different kind of risk. Thank you.

1 THE CHAIRPERSON: Thank you. I'll go
2 back to the Review Board technical adviser.
3 MR. ALAN EHRLICH: Just a -- it's Alan
4 Ehrlich for the Review Board. One (1) question.
5 Daryl, did you say that document is or is -- or that
6 you did or did not place that document on the public
7 registry?
8 THE CHAIRPERSON: Thank you. I'll go
9 back to the Review -- sorry, the Developer.
10 MR. ADRIAN PARADIS: Adrian Paradis.
11 It is on the record. If you give us a moment, I can
12 cite the specific case. It's -- I do know it was part
13 of the Developer's assessment report, as part of the
14 appendix. I believe it was a part of the remediation
15 plan N1 -- Appendix N1 of the Developer's assessment
16 report -- N1 of the Developer's assessment report.
17 So it has been on the registry for quite
18 some time. And, as stated, it was done in 2003,
19 updated in 2006, with updates in 2010, all of which
20 have been in the public domain for quite some time.
21 THE CHAIRPERSON: I'll go back to
22 Review Board staff.
23
24 (BRIEF PAUSE)
25

1 DR. FRANCO OBONI: Thank you, Mr.
2 Chair. I have no doubt that toxicological re -- risk
3 assessment report exists. I actually read -- maybe not
4 that one, or a shorter form. But what I find regretful
5 is that the results of that are not clearly inserted on
6 the side of consequences in the risk assessment.
7 I read in document -- Action Item 21,
8 August 10th, 2012, that:
9 "The method allowed an integration of
10 the result of three (3) kinds of risk
11 assessment, namely scenario
12 assessment, engineering risk
13 assessment, and human health
14 ecological risk assessment."
15 But I don't see the result. I don't see
16 it transposed in the risk assessment, in the
17 engineering risk assessment if I have to be very
18 precise.
19 THE CHAIRPERSON: Okay. Thank you.
20 I'm going to go to the Developer.
21 MR. DARYL HOCKLEY: Daryl Hockley,
22 again. Thank you, Mr. Chairman. Again, let's be
23 careful. And I don't think we should be referring to
24 this ten (10) year old document. I -- I think Dr.
25 Oboni has a good point about the more recent document.

1 It probably would have been helpful to have a paragraph
2 or two (2) in there explaining that there was this
3 other set of information out there. At the end of the
4 day, the -- the -- of course -- yeah, I'll just leave
5 it at that.
6 THE CHAIRPERSON: Okay. I'm going to
7 go back to the Review Board technical adviser.
8 DR. FRANCO OBONI: I would -- sorry.
9 Thank you, Mr. Chair. I will end up quoting two (2)
10 sources of information. One (1) is the federal
11 aviation that says that:
12 "Failure mode effects and criticality
13 analysis
14 in a qualitative way] is an excellent
15 hazard analysis and risk assessment
16 tool, but it suffers from other
17 limitations. This alternative does
18 not consider combined failures, or
19 typically include software and human
20 interaction considerations. It also
21 usually provides an optimistic
22 estimate of reliability.
23 Therefore, FMECA should be used in
24 conjunction with other analytical
25 tools when developing reliability

1 estimates."
2 I will then quote by heart NASA
3 engineering handbook, 2007 -- if I recall well it's
4 page 145 -- that says that risk matrices are good for
5 chatting about risk. They are not to be used for
6 detailed risk analysis, or risk analysis that have some
7 critical aspects linked to them.
8 So you understand now why I believe it's
9 important to review and -- and have this discussion,
10 because the whole system seems to be fully applicable
11 to such a critical and important last -- long-lasting
12 project as Giant Mine remediation.
13 I would like to hear your point of view.
14 THE CHAIRPERSON: Thank you. I'm going
15 to go to the Developer.
16 MR. DARYL HOCKLEY: Daryl Hockley, Mr.
17 Chairman. Can we ask for clarification on the first
18 reference that Dr. Oboni cited? We didn't quite catch
19 it.
20 DR. FRANCO OBONI: Absolutely. It's
21 the Federal Aviation Administration, FAA, and I think I
22 can even give you the proper reference; it's Research
23 and Development Accomplishment, 2004.
24 THE CHAIRPERSON: Thank you. I'm going
25 to go to the Developer.

1 MR. DARYL HOCKLEY: The -- again, I
2 think we're getting into an argument about methodology,
3 and I -- I don't think it's on -- helpful at all. I
4 think it's -- I respectfully disagree with -- with all
5 suggestions, and would note that around the world
6 people do use the same methods that we used for exactly
7 these applications.
8 It -- there's a -- I'll point out some
9 of the -- well, I can, if you want, point out some of
10 the advantages, I think, to this system and why it's
11 more appropriate for our application than that system,
12 but that's exactly the method of logical argument that
13 we probably don't want -- don't want to get too into.
14 The fact, I think, that many, many people in -- in
15 similar applications as yours do use exactly this
16 system is probably better evidence that -- that we're
17 on the right track.
18 THE CHAIRPERSON: Thank you. Review
19 Board technical advisor...?
20 MR. ALAN EHRLICH: Actually, Board,
21 Mr. Chair, it's -- it's Alan Ehrlich, Review Board
22 staff.
23 Just to set the framework here, we're
24 not putting this forward as an argument about detailed
25 methodology; we're trying to consider factors relating

1 to the basic credibility of the risk assessment that
2 the Developers put forward here. We recognize that the
3 process you describe is used in many projects around
4 the world. I think it's safe to say the majority of
5 those are not perpetual-care projects.
6 But with that, it concludes the board's
7 line of questioning. We have one (1) more question
8 from -- not from Dr. Oboni, but from our
9 ecotoxicologist, Katherine Enns.
10 MR. DARYL HOCKLEY: Mr. Chairman, if I
11 could just add that -- that I am aware of a number of
12 perpetual-care projects that do use this method. He's
13 right. It's not the majority of methods that -- the
14 majority of projects, only a small number of projects
15 around the world are perpetual-care projects. So -- so
16 it probably is correct to say that the majority don't
17 use that, but the fact is a number of them do use
18 methods much like the ones we've used here. Thank you.
19 THE CHAIRPERSON: Please proceed.
20 MS. KATHERINE ENNS: Katherine Enns.
21 Before I was going to launch into my two (2) questions,
22 I just wanted to quote from your DAR report where you
23 refer back to your risk assessment and you say:
24 "Sub-leth -- sub-lethal toxicity
25 effects are likely to occur

1 throughout Baker Creek and marginally
2 into Great Slave Lake."
3 I just want to remind you that you did
4 actually conclude sub-lethal toxicity effects. And
5 also, yesterday the conclusion that you would accept
6 greater than 30 percent of fish population death at the
7 end of the pipe solution is an indication you needed to
8 do more.
9 So given that, and your -- your -- I
10 guess your risk evaluation of arsenic in this
11 environment, I -- I guess at my -- as a preamble to my
12 question, I want to focus on what you know and what you
13 don't know, understanding that you've been focussing on
14 the physical structural details of this project, and I
15 think you've done a fine job of that, but that maybe
16 the communication, as you've admitted, has not been all
17 that great.
18 I think that the -- the probability of
19 risk in this case is something that needs to be
20 evaluated in comparison to other cases in -- in British
21 Columbian, and the Yukon Territory, and Alberta,
22 wherever you need to go. But it's not starting from a
23 full understanding of arsenic toxicity in your
24 environment; it's starting from a great understanding
25 of physical, structural details of containing arsenic.

1 So just to -- just to reiterate, the
2 pathways -- and I -- I don't want to take up too much
3 time because there's someone here -- in here who knows
4 way more about this here than I do. The pathways for
5 arsenic for mammals that result in toxicity are usually
6 through drink wat -- drinking water, and they usually
7 result in various different -- start with skin lesions
8 and end up with various different forms of cancer.
9 Fish, as your fisheries biologist on
10 your team has quite correctly said, are not as affected
11 by arsenic as some other organisms are. Benthic ormi -
12 - organisms are far more drastically influenced by
13 arsenic than fish are. That's quite true.
14 However, I don't think you actually have
15 the effects assessment part of your risk assessment
16 completed. And I would suggest that you need to
17 examine the distribution of arsenic in your
18 environment. You need to know more about the dose, and
19 concentration, and timing of -- of arsenic and its
20 effects in your environment.
21 And I say this because having looked at
22 distributions of arsenic in other parts of the world,
23 the stack height and the barriers to dispersal, and all
24 of those questions about distribution of arsenic in
25 your environment, you don't really know. You've done -

1 - got -- done a great job of characterizing
2 concentrations in Baker Creek, but I -- I beg to
3 suggest that you don't understand the areas outside
4 your -- your direct area around Baker Creek and the
5 mine.
6 So given that rather bold statement, I'd
7 like to suggest that if you don't know the risk of
8 distri -- of the distribution and arsenic in your
9 environment that well other than directly around the
10 mine site, how can you say for sure that you have a
11 very much likely -- the same likelihood of arsenic
12 loading to a creek to the north, or to the west, or the
13 south, how -- on what do you make that statement?
14 Like, have you actually sampled there?
15 And if you have not, would you agree to sampling and
16 determining whether or not the northern extension of
17 the -- of the creek, given that you've already agreed
18 to consider a northern diversion of the creek, would
19 you agree that it would be worthwhile trying to
20 determine if there was further loading by diverting the
21 creek or not?
22 THE CHAIRPERSON: Thank you. I'm going
23 to go to the Developer to the question.
24 MR. ADRIAN PARADIS: Momentarily.
25 Adrian Paradis, for the record.

1 (BRIEF PAUSE)

2

3 MR. BRUCE HALBERT: Mr. Chair, Bruce
4 Halbert. One (1) of the points I picked up in Ms.
5 Enns' dialogue there was talking about effluent
6 toxicity. And if I -- looking at the DAR, we're
7 talking about a specific section here, 7.4.3.7, this
8 relates to toxicity of the effluent itself. As I
9 stated previously, the -- the effluent has been shown
10 to be consistently non-acutely toxic. There are some
11 sub-lethal toxicity effects on some of the smaller bi -
12 - aquatic biota, as -- as evidenced by the test
13 results. But on -- on dilution within the receiving
14 environment, that sub-leth -- sub-lethal toxicity
15 certain dissipates very quickly.
16 Now, to get to the bigger picture, the
17 ecological risk assessment component that's in this
18 document that Daryl was referring to earlier looks at
19 arsenic distribution throughout the environment in all
20 media including air, water, sediment, soils,
21 vegetation, species, et cetera. That was all taken
22 into account in doing the ecological risk assessment.
23 Pathways of exposure for various species include, not
24 just drinking water, but all means of food that are
25 consumed by those organisms.

1 So it was a very comprehensive and
2 detailed assessment, including off site effects within
3 Back Bay, Yellowknife Bay.
4 So in this -- in one of the appendices,
5 Appendix A, I believe, of this -- this report, we
6 summarized the data that was gathered by various
7 researchers, by the project itself, by other
8 institutions in the study area. That all became part
9 of this -- this assessment, including measurements that
10 were made on medicinal plants that Dr. Laurie Chan was
11 involved with that was part of that peer review panel.
12 He was also retained by the Yellowknife Dene to -- to
13 investigation arsen -- arsenic distributions within
14 foods, particularly medicinal plants and teas that are
15 consumed by the Aboriginal community.
16 So I think we have a fairly decent
17 understanding of arsenic and its distribution in the
18 environment in and around the Giant Mine site and in
19 the broader -- broader local study area.
20 The conclusions of our risk assessment,
21 and going back to Baker Creek specifically, is that
22 they're low risk to fish species. There are residual
23 risks to benthic invertebrates, that is sediment
24 dwelling organisms mostly related to sediment, not to
25 the water column. There are low risks to aquatic

1 mammals that rely on the aquatic system, such as
2 muskrat. There was actually survey work undertaken
3 specifically to look at effects within Baker Creek on
4 that particular community. The results of that work
5 clearly demonstrated that they were not being adversely
6 impacted.
7 So we see a system here that a risk --
8 from a risk perspective suggests that the risks are
9 low. The results of recent field investigations are
10 supporting that conclusion. And we don't see any
11 reason why that system, moving forward, is not going to
12 rehabilitate to be -- to be a productive system in all
13 regards.
14 THE CHAIRPERSON: Thank you. I'll go
15 back to the Review Board experts.
16 MS. KATHERINE ENNS: Kat Enns, again.
17 Those are modelled results. I'm aware of the
18 measurements that you took. You took concentrations in
19 berries, thirteen (13) samples. You did concentrations
20 in -- in tissues of fish from the literature that was
21 cited in the report. But those are modelled repor --
22 modelled results; those are not actual effects'
23 evaluations. And there -- there was no review of the
24 previous human health conditions affecting the Dene
25 people. There was no executive summary summarizing the

1 previous mortality. There was no discussion of human
2 hair arsenic concentration, or urine analysis. There
3 was no actual individual effects monitoring or -- or
4 examination.
5 So although you have done a great job
6 and a typical job of -- of using models in a risk
7 assessment that is usually accepted in Canadian law, in
8 this instance this is a huge amount of arsenic and a
9 vulnerable population, and I would have thought that
10 you had gone a little bit further. I'm just simply
11 suggesting that you might want to consider going a
12 little further again and examining those -- those
13 effects. So that is my comment.
14 My next question -- or does the -- does
15 this go to the Developer to answer? Can I ask -- okay,
16 great. Because I want to get over this and get on to
17 the next person who wants to ask a question, too.
18 So when you have -- do you have the
19 author of the human health risk assessment here, the
20 person who did the modelling and the -- and the work on
21 the report?
22 THE CHAIRPERSON: The Developer,
23 please.
24 MR. BRUCE HALBERT: Thank you, Mr.
25 Chair. Bruce Halbert. No, we have a whole team of

1 people in our office, including some senior
2 toxicologists and people that do environmental
3 modelling. I certainly -- I led this project and I
4 certainly reviewed all the work that went into it, but
5 I'm not the sole person that did all the work.
6 MS. KATHERINE ENNS: Kat Enns. The
7 reason I ask is because you made a statement earlier on
8 today where you said that the risk to -- to people from
9 eating the fish here was greater from eating the fish
10 from the grocery store than it was from eating fish in
11 the bay. That was on the record. And I just wanted to
12 point out that that -- that perhaps that is based on
13 the assumption that marine fish and -- and seafood were
14 included in -- in a typical store diet, because those
15 ob -- obviously do have higher concentrations of
16 arsenic in them and will show up in -- in tests more
17 than say, local foods are.
18 Is that a -- a fair -- but -- but my
19 question is: Is that a fair comparison to make here in
20 the hearing that -- that fresh, local fish arsenic
21 concentrations would be more dangerous from a store
22 source than from country foods?
23 THE CHAIRPERSON: Thank you. I'm going
24 to go to the Developer.
25 MR. BRUCE HALBERT: Thank you, Mr.

1 Chair. Bruce Halbert. The reference you're -- you're
2 personally referring to; Daryl Hockley was -- was
3 speaking to arsenic intakes. He was not talking about
4 fish bought from the store. The comparison we were --
5 the -- the human health risk assessment was purposely
6 designed to look at all sources of exposure, and
7 includes store-bought foods, and that's specifically
8 what Daryl was referring to. That's breads, and
9 grains, and rice, and whatever the typical Canadian
10 diet is. So that's -- that's one (1) part of the input
11 to the overall assessment. Included in the assessment
12 is local harvested game, fish, drinking water, berries,
13 and such.
14 So the local diet was taken into
15 account; added to that is the store bought component.
16 So the comparison that Daryl made is that there's a
17 much higher dose intake, or arsenic exposure if you
18 will, intake from store bought foods than there is, by
19 comparison, from consumption of locally caught fish.
20 MS. KATHERINE ENNS: Thank you.
21 Katherine Enns, again. Thank you for that
22 clarification. I appreciate that. That's quite
23 correct, and I agree. However, it is a modelled
24 result, not an actual measurement in the local
25 population, and I would suggest, as a baseline, you

need to start with that and move on. No further questions. Thank you.

THE CHAIRPERSON: Thank you. Is there any further questions from the Review Board staff, technical or law -- legal?

MR. ALAN EHRLICH: Mr. Chair, here are no further questions from the Review Board staff --

MR. ADRIAN PARADIS: Mr. Chair...?

MR. ALAN EHRLICH: -- technical experts, or legal counsel.

THE CHAIRPERSON: Thank you.

MR. ADRIAN PARADIS: Mr. Chair -- can we --

THE CHAIRPERSON: Go -- go ahead.

MR. ADRIAN PARADIS: -- clarify a -- a response there from Katherine Enns, at the very end there? I -- I think it does warrant a -- a clarification from the project team.

THE CHAIRPERSON: Okay. Please proceed.

MR. BRUCE HALBERT: Yeah, just -- I'm sorry, Mr. Chair, Bruce Halbert. The point of clarification we'd like to make here is that we're using, in large part, measured data, not modelled data. True, we integrate this -- we feed it through a model,

1 if you will, to calculate the actual intakes. But we
2 have measured berry data, we have measured garden
3 produce data; wherever we had measured data that was
4 available to us, local to the study area, local to the
5 mine site, we used that as part of the assessment.
6 So it -- I don't want to leave the
7 impression here that we're -- we're not looking just at
8 some theoretical model result. To the best of our
9 ability, we have taken into account local exposure.
10 THE CHAIRPERSON: Okay. Go back to the
11 Review Board technical.
12 MS. KATHERINE ENNS: Kat Enns, again.
13 With respect, you're using factors in a model. Is that
14 correct, yes or no?
15 MR. BRUCE HALBERT: Only for parts.
16 There's no straight "yes" or "no". When we're
17 calculating people's exposure, we're taking into
18 account how much they eat, the measured concentration
19 of arsenic in the berries, and that results in an
20 intake. And it's the intake that we're comparing here.
21 MS. KATHERINE ENNS: This time, really
22 no further questions.
23 THE CHAIRPERSON: Thank you. Okay. I
24 want to go to my far right, board member Danny Bayha.
25 MR. DANNY BAYHA: Thank you, Mr. Chair.

1 Earlier in your presentation, we had a little bit of
2 discussion on the ISO 14000, and the issue was brought
3 up, and there was a little bit of explanation on -- and
4 I -- I don't know, I just wanted to get what you were
5 saying on the issue of you really -- what I got out of
6 it is can't have both. You can't have 14001 and have
7 local input into the monitoring of this program.
8 Is that right?
9 THE CHAIRPERSON: Thank you. I'll go
10 to the Developer.
11 MR. MICHAEL VAN AANHOUT: Thank you,
12 Mr. Chairman. Michael Van Aanhout. And to clarify
13 that no, that -- that wasn't my impression to give that
14 impression -- that wasn't my intention to give that
15 impression. You could have both. The point I was
16 trying to make is, first, to lay out what the options
17 were and the process by which we arrived at the
18 approach being pursued here.
19 Another point that I intended to raise
20 is that what we've observed, in terms of the decision
21 to make -- to become registered or certified, seems to
22 be much more driven by what are called, sort of,
23 "supply chain" or "procurement requirements" usually
24 then community requests.
25 Usually, in our experience and what we

1 see through out research, community members are looking
2 to be engaged in the process and to have transparency
3 and that their inputs are taken into consideration, and
4 that the -- by virtue of having a stamp of approval, as
5 I said, through our experience and research, we haven't
6 seen that as being a differentiator around the success
7 or credibility of a program. Thank you, Mr. Chair.
8 THE CHAIRPERSON: Thank you. Mr.
9 Bayha...?
10 MR. DANNY BAYHA: Thank you for that
11 clarification. The other question, I guess: There
12 were some issues of research. I guess in the long-
13 term, you know, when you think about research and the -
14 - the reason, or the impetus, or the push, or the --
15 the -- when I -- once I heard that war is a very --
16 it's a creator, or a is real real push for -- for
17 inventions. That's when the most inventions happen, or
18 new development happens.
19 So in this case, you know, if you were
20 to think about in-perpetuity of this and the
21 possibility of -- of -- of having new, different
22 technologies of treating, or of -- of remediating, and
23 removing from a system, if there is no research part of
24 it, or -- or push, or funding, or plan for that sort of
25 thing for this whole frozen-model method that you're

1 proposing, are you depending on somebody out there in
2 the world to treat -- try to come up with an answer, or
3 spend the resources, the energy, to -- to treat
4 arsenic, or are you actively going to plan to seek
5 research on your own as -- as -- as a proponent in this
6 case? Thank you.
7 THE CHAIRPERSON: Thank you. I'm going
8 to go to the Developer, to the question.
9
10 (BRIEF PAUSE)
11
12 MS. JOANNA ANKERSMIT: Thank you, Mr.
13 Chair. Joanna Ankersmit. I think that it's important
14 to give examples of the -- the kind of research that's
15 -- that is going on, and to bring some perspective.
16 It's the complexity really related to what will drive
17 this, in terms of perhaps finding a different method.
18 And we're -- it's not just about the
19 arsenic trioxide; the site is bigger than that. So, an
20 example I think somebody brought up yesterday will be
21 when we recapitalize the water treatment plan. So we
22 will -- there's components in this system that will
23 have to be re-capitalized over time. So when we do
24 that, I'm fairly confident -- no, I'm very confident
25 that the bureaucrats of the day and the people

1 designing this system will look at what is the best
2 practice then, and integrate that into any
3 recapitalization so -- to get efficiencies.
4 But I think it's impor -- it's not a
5 simple question, and it's not that we're opposed to
6 research, and we will look at advances that happen.
7 We've committed to doing that every ten (10) years, and
8 that will definitely be with the input of stakeholders.
9 But could I ask Daryl: Do you want to
10 add any examples?
11 MR. DARYL HOCKLEY: Yeah. I think the
12 -- what -- what I thought would be helpful, we -- we
13 are -- the proponent is -- this is Daryl Hockley. The
14 Developer is committed to the ten (10) year reviews of
15 -- of what is going on out there. But, just so you're
16 not thinking that that's just waiting around, a lot is
17 going on in this area. I can just give you a couple of
18 examples.
19 McGill University has one -- in Montreal
20 has one of the -- the most advanced programs in the
21 world right now, looking at better ways to do arsenic
22 water treatment. That's a -- that's an ongoing
23 project, and -- and I think will have improvements in -
24 - in a ten (10) year timeframe.
25 Uranium mining companies around the

1 world are -- uranium's a very toxic material. You
2 can't even get close to it, because it's radioactive.
3 So uranium mining companies are always working on
4 better ways to get their ore out of the ground without
5 having to put people at risk. So they might well have
6 innovations that will be quite useful to us ten (10) or
7 fifteen (15) years, in terms of removing the arsenic.
8 In terms of reprocessing, one (1) of the
9 biggest sources of copper in the world right now that's
10 not being mined is a copper-arsenic mineral. It can't
11 be mined because nobody knows how to process the
12 arsenic and stabilize it. So -- so there's -- there
13 are billions of dollars of copper deposits sitting out
14 there. Every major mining company I know has a
15 research program going on to figure out how they can
16 get -- get that ore, handle it, and deal with that
17 arsenic.
18 So that's why I think it would -- yes,
19 Joanne (sic) mentioned, we could throw a bit of money
20 into this, too. And in fact, John, I don't know if you
21 did mention, you do sponsor research on site-specific
22 things like -- like risk and -- and like local sediment
23 uptake, those sorts of things. Queen's University does
24 some research directly for you and others.
25 But to -- to throw INAC's additional

1 money into this massive pot that's being expended out
2 there, I'm not sure it would help. What I -- I --
3 again, as I said, if I was a concerned citizen, I'd
4 focus on those reviews every ten (10) years, and see
5 what's out there, and -- and if anything looks good
6 from there, then direct money into making it applicable
7 to here. That's -- that would be my advice.
8 THE CHAIRPERSON: Thank you. Danny
9 Bayha...?
10 MR. DANNY BAYHA: Yeah, thank you, Mr.
11 Chair. Earlier, I guess, there was some -- over the
12 course of the couple of days -- yeah, tomorrow's
13 another day -- but, I don't know, every time we have a
14 hearing -- I mean, every day we have a presentation and
15 questions come, and it seems like there's committees,
16 committees for that, committees for this, committees --
17 how many, exactly, committees do you have right now?
18 THE CHAIRPERSON: Thank you. I'll go
19 to the Developer.
20 MR. ADRIAN PARADIS: Adrian Paradis, on
21 behalf of the project team. Respectfully, we'll ask --
22 we -- we actually have a presentation on that tomorrow.
23 We'll try and outline that. You're right, there is
24 committees, and committees, and committees, and it's
25 somewhat interesting that -- yeah, I'll -- I'll leave

1 it there, for better left shorter.
2 THE CHAIRPERSON: Okay. Thank you.
3 Mr. Bayha...?
4 MR. DANNY BAYHA: Yes, thank you.
5 Again, over the course of a few -- I know perpetual
6 care -- today's the time to talk about perpetual issues
7 and -- and funding tomorrow. But for now, I think for
8 me, one (1) of the things that is of, I think, interest
9 or -- about the issue of communication, communication
10 about this project into the future, and the questions
11 that -- it was brought up yesterday at the committee
12 meeting. A lady came and said, Well, how are you going
13 to communicate to the future?
14 And, of course, the way it's been done
15 typically, of course, in a -- in a -- in the Dene
16 culture, of course, is -- is by oral history and all
17 that. And right now -- and I -- I don't see it in some
18 of the -- your initial thought about perpetual care,
19 and -- and on that, the -- the thought of
20 communicating.
21 Have you thought about putting some of
22 this stuff in schools, about this type of -- of a
23 situation? That -- that might be more -- and -- and
24 trying to have that whole thing be as an educational
25 tool for our young children, so that a long time, in

1 the future, that, you know, that certainly could be an
2 issue of -- of consideration, right from, you know,
3 young teens to late teens, or I don't know. I just
4 want to know if you have thought about that. Thank
5 you.
6 THE CHAIRPERSON: Thank you. I'll go
7 to the Developer.
8 MS. JOANNA ANKERSMIT: Thank you, Mr.
9 Chair. I'd like to put Mr. Bayha on the perpetual-care
10 working group. He definitely has some good ideas
11 already.
12 Part of the challenge on the perpetual
13 care is that we're -- we need to get through this
14 process so that we understand what is the project that
15 we're perpetually caring for. So there's a bit of a --
16 a bit of a process here, understanding that if we have
17 this pro -- this -- we're able to implement this
18 project that we have put forward, this is where, I
19 think, we're asking you to indulge us in the sense that
20 these are very complex, complex things that we're
21 thinking of. And to -- for us to show up today and say
22 that we've got it all figured out how we're going to
23 communicate with future generations, it -- we're -- we
24 certainly cannot do that alone.
25 And we certainly will be relying on the

1 -- the Yellowknives Dene and the -- and the Metis, and
2 others that have experience; folks like Randy Freeman,
3 that -- that have looked at this and how things get
4 communicated through the generations.
5 So admittedly we're focussed on getting
6 a project so that we can create a safe environment. We
7 need to understand exactly what that project is, what
8 it is that we collectively will be caring for for some
9 time into the future, and then work collectively over
10 the next many years, I would say, because I think it
11 will be a process that, given the way technology
12 evolves, there will be lots of changes.
13 The perpetual care itself will be
14 evolving. We will integrate continuous improvement.
15 That's the EMS; its foundation is continuous
16 improvement. It creates a system that allows us to con
17 -- continually evolve our thinking. And a project that
18 is going to last for a very long time needs to have
19 that as its core.
20 THE CHAIRPERSON: Thank you. Board
21 member Danny Bayha...?
22 MR. DANNY BAYHA: Thank you, Mr. Chair.
23 Thank you for your response. Thank you.
24 THE CHAIRPERSON: Thank you. Board
25 member Rachel Crapeau...?

1 MS. RACHEL CRAPEAU: First of all, I'd
2 like to clear up something. The berries/medicinal
3 plants, in the studies done by the Yellowknives Dene
4 was to see that we need to know if berries around the
5 traditional harvesting areas were safe to eat. Because
6 back then the Yellowknives Dene wanted to know if what
7 they were told by the Elders, where -- where to gather
8 and where not to gather berries or medicinal plants,
9 was true.
10 And the young people who are young
11 grandparents now want to know if, not only the -- if
12 the substance that's underground is dangerous, but what
13 on the surface? Is that okay to walk around in? Or is
14 it okay for animals? And is it okay for human
15 consumption of berries, or plants, or the animals?
16 They wanted to know about their health. And they also
17 wanted to know who to get to help them check the plants
18 and berries that were collected.
19 And I remember one (1) young man, and
20 he's a father now, Agita (phonetic), travelled with the
21 boat and got some other young people to collect plants,
22 even Lawrence Goulet (phonetic) helped out. And Agita
23 hurt his hand collecting the plants by the shoreline.
24 That collection of items was sent to SENE (phonetic) at
25 McGill University in Montreal, whereby Dr. Laurie Chan

1 checked the information and did the tests for the
2 Yellowknives Dene.
3 Just to put it in context why the
4 collection was done, because the Yellowknives Dene were
5 thinking down the road and trying to figure out what to
6 do. If they want to further their investigation, I'm
7 sure that it's up to the Yellowknives Dene to decide
8 what sort of monitoring they want to do later on down
9 the road, and everybody put their thinking caps
10 together.
11 I remember one (1) summer coming home
12 from school in Fort Smith and being in Dettah, this
13 nurse and somebody from the health department came to
14 our house and they wanted to know what did we eat. And
15 my dad told them we ate fish, caribou, moose, ducks,
16 rabbits, chickens, everything. It was a very
17 traditional diet.
18 And those were the days when we still
19 went down to the shore and got our buckets of water for
20 use in our house. It was before we were told that we
21 had to have our water delivered. We didn't know why,
22 but maybe now most people know why.
23 But that study was done on the diet of
24 the Dene in this area. So Health Canada, somebody
25 should be able to go to the federal government's

1 archives and be able to retrieve information and share
2 it with everybody here, and especially the Yellowknives
3 Dene, because this study was done, I assume, to protect
4 their health.
5 My concern and question is, if you're
6 going to use the berries and plants study that the
7 Yellowknives had -- had done, they even did a study on
8 mercury -- you know, better to go to the Yellowknives
9 Dene and talk with them and see if -- if more is
10 warranted.
11 During the time when the independent
12 peer review group was here, Dr. Laurie Chan was here
13 and he talked to some of our people, and he explained
14 about his work as a toxicologist. And it was
15 interesting to -- to talk with him about the effects of
16 how arsenic from the soil would get sucked up by the
17 berries. It got into the berries through the stem and
18 then travelled. Like, berries grow, it takes all its
19 moisture from the ground, and the arsenic was in the
20 berries on the ground.
21 So the people were also interested in
22 the muskrats and the beaver that go in -- in there, in
23 the creek. And right now, if you drive by there,
24 you'll see the ducks feeding in that creek. A couple
25 of our guys went with a biologist to collect muskrat

1 and beaver.

2 But how is the Developer going to be

3 working in the future with the Yellowknives Dene on

4 this plans for future monitoring? That's what I was

5 kind of wondering about.

6 And the environmental monitoring plans,

7 you know, how they -- how you write it out, maybe the

8 Dene perspective of monitoring is different, so we need

9 more information.

10 Also, how are the results of the

11 monitoring information going to be reviewed? Who's

12 going to take a look at your test result of that

13 muskrat that you caught and you dissected and look at,

14 and check the tissues for its health? Who's going to

15 sit and say to the Dene, This is what we found, the --

16 the muskrat is safe to eat? Those are the kinds of

17 monitoring that the Dene are talking about.

18 And last night, I heard plants, food,

19 trails, medicinal plants, the Dene health, water, and -

20 - need to work on communication. And there's lots of

21 work that still needs to be done, so I'm just wondering

22 how is it going to be done with the Dene?

23 And -- and even people who want to live

24 here and retire here and not run away from us and live

25 in BC, we need to figure out how we're going to work on

1 this together. That's what I was kind of wondering
2 about. I hope it helps, this information. Thank you.
3 THE CHAIRPERSON: Just so I'm clear,
4 Rachel, was there a question in your presentation and
5 comments to the Developer?
6 MS. RACHEL CRAPEAU: Yes, but maybe
7 nothing specific. Like, how we do in the mon -- how is
8 the monitoring going to be communicated to the Dene?
9 How -- are you planning to use future studies, like the
10 berry study, with the -- with the people from here?
11 People have to be involved.
12 At -- and the wildlife, health of the
13 wildlife that they use. If studies are going to be
14 done on the health of -- of the muskrat, the muskrat
15 and the beaver, and -- you never know, caribou might
16 show up here again. If caribou ate in that site and
17 they were tested how is this all going to be done?
18 Thank you.
19 THE CHAIRPERSON: Okay. Thank you.
20 I'm going to go to the Developer to questions.
21 MS. JOANNA ANKERSMIT: Thank you, Mr.
22 Chair. And thank you, Rachel, for wat -- explaining
23 that and giving us a little bit of the -- the history.
24 There -- there's an answer, which is: We're going to
25 develop our environmental monitoring plans.

1 And I don't think that's what you're
2 asking. I think you're asking, and correct me if I'm
3 wrong, but I think you're asking how will we make sure
4 that we're getting the input into what we're studying,
5 and how will we ensure that we don't go out to Dettah
6 or to N'Dilo with a fancy present -- presentation with
7 a whole bunch of figures on it; that we sit down with
8 people and communicate to them what we're finding in --
9 in a very honest and transparent way.
10 That doesn't have a simple answer.
11 There's been an effort on the part of the project, and
12 as you've heard we will dev -- be developing with the
13 input of -- of th YKDFN environmental monitoring plans.
14 And so -- and we will be working with GMAC to ensure
15 that there's a connection between the project team, the
16 advisors within the YKDFN, and also with chief and
17 council.
18 We also have members of our team, Lisa
19 Colus (phonetic) specifically, and folks that -- folks
20 from here that are available to come into the community
21 at any time to speak with the community on the work
22 that we're doing.
23 THE CHAIRPERSON: Okay. Thank you.
24 The Developer did a presentation on -- on perpetual
25 care, related risk, and adaptive management, so I'd

1 just like to -- is there any further questions, Rachel
2 Crapeau, to their -- their presentation?
3 MS. RACHEL CRAPEAU: In your
4 information, you have something that says, "baseline
5 monitoring program currently in development." How are
6 the people from N'Dilo or Dettah involved in the
7 baseline monitoring program?
8 THE CHAIRPERSON: Thank you. I'll go
9 to the Developer to the question.
10
11 (BRIEF PAUSE)
12
13 MR. MARK PALMER: Mr. Chair, Mark
14 Palmer. We're currently doing a GAP analysis of all
15 the information that's out there in previous studies,
16 and -- and we're going to be going out and trying to
17 just get a baseline to start off our monitoring
18 program. The EMS working group of the parties will be
19 involved in the -- in the design and -- and reviewing
20 the data for that. Thank you.
21 THE CHAIRPERSON: Okay. Thank you for
22 your response. Rachel, is there any further questions
23 you have?
24 MS. RACHEL CRAPEAU: Who -- who is part
25 of this -- the designing?

1 THE CHAIRPERSON: I'll go to the
2 Developer to the question.
3 MR. MARK PALMER: The design of the
4 monitoring program? Well, I'll take it a step further.
5 Right now, we're getting a baseline. The EMP that
6 we'll be developing for monitoring the effectiveness of
7 our cleanup, i.e., going around the site, sampling fish
8 and berries and -- and mammals, that will be developed
9 in consultation with YKDFN, North Slave Metis.
10 But we'll need some traditional
11 knowledge. We haven't developed that yet, so that'll
12 be -- we'll be going out and getting that information
13 and seeking input on where to collect samples, what to
14 collect, and when to collect it, so that the
15 information will be meaningful. We -- we're not there
16 yet, but the ongoing monitoring plan, that -- that's
17 really key, and -- and what the involvement of -- of
18 the North Slave Metis and YKDFN in helping us collect
19 those samples as well has not been decide -- or
20 designed yet. We still have to come out and -- and
21 consult on that. I hope that answers your question.
22 THE CHAIRPERSON: Okay. Any further
23 questions, Rachel Crapeau?
24 MS. RACHEL CRAPEAU: Usually,
25 summertime or -- no, springtime, when students leave

1 colleges and head home and they're looking for summer
2 jobs, how often does Golder, or the environmental
3 consulting companies in Yellowknife or in the North,
4 hire young students from Yellowknives Dene, or Tlicho
5 communities, or Metis communities? Is there a lot of
6 involvement from the Dene communities with collection
7 of samples, or is that still yet to come in future
8 negotiations with the First Nations? Thank you.
9 THE CHAIRPERSON: Thank you. I'll go
10 to the Developer.
11 MR. ADRIAN PARADIS: Adrian Paradis, on
12 behalf of the project team. On any program that we
13 have, Golder's a -- I'll -- I can use good examples,
14 actu -- actually a program that's starting this
15 morning. Part of what actually happens is we send out
16 letters. Golder sometimes sends them on our behalf, or
17 we send them on our -- or we send them from our office
18 to the North Slave Metis Alliance, YKDFN, and other
19 communities, looking and asking for folks who are
20 available.
21 This morning, we started our
22 environmental effects monitoring program underneath the
23 Metal Mining Effluent Regulations. It is the second
24 part of our program that we've conducted this summer.
25 Half -- or not quite half, maybe -- the crew is made up

1 of membership from the YKDFN. I'm not sure about the
2 North Slave. I actually just don't know about those --
3 those -- who is all on the crew this morning.
4 Have we got the success we've wanted?
5 No. I've actually asked and tried to get a hold of
6 both Randy at different times, Terry, to start to try
7 and find different membership. Earlier this summer,
8 our site contractor, Deton'Cho Nuna, was asking for
9 additional help, even looking for just someone who is
10 skilled.
11 So there's different programs that we've
12 got for monitoring and other work -- work that we do,
13 and it's hit-and-miss on our success of hiring folks,
14 based on sometimes just their availability and
15 sometimes just our availability to get a hold of the
16 communities to find someone who is interested. Thank
17 you.
18 THE CHAIRPERSON: Okay. Thank you.
19 How many more questions do you have, Rachel?
20 MS. RACHEL CRAPEAU: No more questions.
21 I was just more really interested in monitoring and
22 future monitoring, and I got the impression from the
23 Yellowknives Dene that they were very interested in
24 monitoring, too. That's why I was asking these
25 questions. Thank you.

1 THE CHAIRPERSON: Thank you. Richard
2 Mercredi, board member...?
3 MR. RICHARD MERCREDI: Yeah, thank you,
4 Mr. Chair. I just have a couple of comments, I guess,
5 on communicating to future generations, and then a
6 question. I guess -- I guess it's un -- it's
7 unfortunate as I see this project unfolding. We hear
8 about the tragic consequences of, I guess, what happens
9 when mankind's greed overcomes everything else and we
10 forget about our environment.
11 And then, you know, today as we -- as we
12 progress, as mankind progresses, we realize that
13 environment and how important it is to us and what
14 happens when we ignore the environment. And this --
15 this is the results, I guess. And now forever we have
16 to do the perpetual, you know, care of this project.
17 And what I'd like to know from the
18 Developers is: You have communicating to future
19 generations here, and I don't know if it's a
20 suggestion. I guess it's -- you know, you can go back
21 to your -- to your masters, I guess. And I think that
22 every school in the country should -- they should --
23 the Government of Canada should be designing some kind
24 of science project curriculum, or whatever you want to
25 call it, so that every student in Canada has to take a

1 course on science and what happened at Giant Mine, and
2 what happens when people don't look after the
3 environment.
4 It's something that you want to --
5 everybody in Canada, every kid has to know about this
6 if they're going to look after this site when we're
7 gone. So I think something like that has to happen.
8 It'll maybe have to be legislated so everybody knows,
9 everybody has responsibility.
10 Because you can look around like, you
11 know, we've had some terrible things in this world,
12 like the last war we had World War -- the last big war,
13 anyways, World War II. And, you know, people talk
14 about it, talk about it, but over time, slowly, it's
15 slowly dwindling away. Every year you see less and
16 less people at Remembrance Day on November the 11th.
17 And, you know, when I look at this, you know, I can see
18 down the road there's serious concern for the same
19 thing happening, if we don't do something that makes
20 sure every person knows about it, every young person.
21 Thank you.
22 THE CHAIRPERSON: Thank you. That was
23 just a comment, so we're going to go to board member
24 James Wah-Shee; questions for the Developer on their
25 presentation?

1 MR. JAMES WAH-SHEE: Thank you, Mr.
2 Chairman. I'll try and not to take too much time,
3 because there's a couple of board members that may wish
4 to ask questions or make comments.
5 I'd like to focus my comments in -- in
6 regards to perpetual care. It seems to me that in the
7 presentation, in addressing the problem that we have
8 with the Giant Mine clean-up, that the whole idea and
9 concept of infinity is very difficult for people.
10 Since you're a part of the project team I imagine
11 that's quite a considerable challenge to deal with the
12 whole idea of perpetual care.
13 Now the method that you're using in
14 regards to the freeze -- freezing the block, as you
15 indicated as the best method for our time, but I would
16 -- I would not like to see that -- the government is
17 particularly resigned to the whole notion of perpetual
18 care in regard to keeping the arsenic frozen and under
19 the ground, and not really looking at other
20 alternatives; maybe not now, but in the future.
21 I think the method you have indicated is
22 -- is one that perhaps is the best one for the time
23 being, but as you indicated it's an interim solution.
24 Certainly it's not a long-term solution, because
25 between now and a hundred years or more there may be

1 new technologies and new ideas that will come forward.
2 And therefore, we may have to look at changes to the
3 method in terms of how we address the -- the whole
4 arsenic problem.
5 Perhaps, it doesn't have to continue to
6 be buried there. It may be possible in the future to
7 take it out. Who knows? We don't have a crystal ball
8 to take a look at it.
9 But I guess my point is that I would not
10 like to see us get -- to be resigned that there's only
11 one (1) way of addressing this problem. Because if you
12 get into the whole notion of perpetual care in dealing
13 with the arsenic problem then what we are doing is that
14 we are making a perpetual commitment of the state
15 treasury. In doing so you are binding the future
16 generation in regards to the commitment of the national
17 treasury in expending the money for perpetual care.
18 So -- and -- and this comes to mind that
19 that's the -- this is the reason why I believe that
20 research and development can play a very important role
21 in -- in regards to not only collecting new technology,
22 but also keeping in mind what happens in other parts of
23 -- of the world where they are -- are dealing with
24 hazardous waste and the different approaches of -- of
25 containment, and perhaps to just deal with it.

1 But I guess I -- I find it difficult
2 where the House of Commons, as -- as we all know, when
3 they do their business they -- they cannot bind future
4 parliaments. They can only deal with the -- with the
5 current parliament in session where they make
6 allocations of money for different federal departments,
7 and usually it's done on a five (5) year basis or so.
8 So I -- I guess my question is -- is
9 that I would hope that this particular approach that
10 you are considering will be viewed as an -- as an
11 interim arrangement, an interim solution, which would
12 lead to a long-term solution.
13 In other words, I don't think the very
14 notion of being resigned to the idea of perpetual care
15 here between now and eternity, that in itself is not
16 acceptable. And the reason being is that -- is that I
17 think we would like to embark on -- on an interim
18 solution which would lead to a long-term solution which
19 in the long run the objective and goal should be to
20 eliminate perpetual care. Because if -- if we are
21 resigned to perpetual care then that means that we will
22 not be looking at other methods of -- of addressing
23 this particular unique problem.
24 So I -- my suggestion would be is that
25 perpetual care should be only viewed in terms of a

1 short-term arrangement and not from here to eternity.
2 It's just a comment that I have, and you -- you may
3 respond, if you wish. That's the only comment and --
4 that I have, Mr. Chairman.
5 THE CHAIRPERSON: Thank you, Mr. Wah-
6 shee. The Developer, if they wish to respond? It's a
7 comment, but if you have an opportunity to respond,
8 fine.
9 MS. JOANNA ANKERSMIT: Thank you, Mr.
10 Chair, and thank you. I just wanted to go on the
11 record that I couldn't have said it better myself.
12 It's Joanna Ankersmit. And I clearly haven't, because
13 that was very well articulated.
14 I think sometimes we get -- what we have
15 said is that we're proposing a solution that is able,
16 that is robust, that we're confident, because we don't
17 know what's coming, that will be protective for a very
18 long time, and that we have committed, I believe it was
19 in the technical sessions, Alan, that -- that I made a
20 commitment that I'm quite -- that we would for sure
21 undertake at the hundred year point a full look at
22 this. I don't think it will be hundred years; I think
23 it will be before that.
24 So that's a long answer to saying I fun
25 -- we agree with -- with the Board member.

1 THE CHAIRPERSON: Thank you. It's
2 good to hear that you agree with a Board member. It's
3 not often I hear that from that side of the table. I'm
4 going to go to Percy -- Percy Hardisty, questions for
5 the Developer on their presentation?
6 MR. PERCY HARDISTY: Mr. Chair, I -- I
7 don't have any questions right now.
8 THE CHAIRPERSON: Thank you. Board
9 member John Curran, questions to the Developer on their
10 presentation?
11 MR. JOHN CURRAN: Thank you, Mr.
12 Chairman. It was great to hear some agreement there.
13 Maybe we've been working too low in the chain. Joanna,
14 maybe I could ask these questions of you. No offence,
15 boys.
16
17 (BRIEF PAUSE)
18
19 MR. JOHN CURRAN: I didn't know we
20 could do that before.
21 This is a -- a lengthy project and
22 things are happening at different times along the way.
23 We're talking about adaptive management here as part of
24 it, so let's see how adaptive we can be.
25 When are you planning to be working on

the creek?

THE CHAIRPERSON: Sorry, could you repeat your question?

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. Thank you. I'll go to the Developer.

MS. JOANNA ANKERSMIT: I'm thinking through the -- Joanna Ankersmit. I'm thinking through the steps. We have consultation. We have science. We have the water licence process. Fisheries authorization. So we're back into somewhat crystalballing, but five (5) years.

THE CHAIRPERSON: Thank you. John Curran...?

MR. JOHN CURRAN: Your contractors have opinions about the creek, our contractors have opinions about the creek; no offence, but none of you live here and drink the water and eat the fish. YK Dene live here. North Slave Metis live here.

Over the next five (5) years, would you commit to working with the YK Dene and the North Slave Metis to develop the final routing plan of Baker Creek, and to ensure that the fish they have relied on for

1 generations are given the best habi -- habitat that is
2 achievable, given the realities of the site, and that
3 their way of life is protected, by extension? Thank
4 you.
5 THE CHAIRPERSON: Thank you. To the
6 Developer.
7 MS. JOANNA ANKERSMIT: Joanna
8 Ankersmit. Yes.
9 THE CHAIRPERSON: Can we turn up the
10 mic a bit? That's two (2). Thank you. I'm going to
11 go back to the Developer here (sic).
12 MR. JOHN CURRAN: Is it bet -- thank
13 you. Well, while we're on a roll here, let's go for
14 the hat trick, shall we? When are you planning on
15 putting that diffuser in the water?
16 THE CHAIRPERSON: Thank you. I'm going
17 to go to the Developer.
18 MS. JOANNA ANKERSMIT: Thank you, Mr.
19 Chair. It's interesting that you threw out all my
20 engineers, and then you're asking me these questions,
21 but I think it's about the same timeframe. The same
22 types of engagements have to happen and processes and
23 licensing, so on and so forth. So five (5) years, I
24 think; five (5) to six (6) years.
25 THE CHAIRPERSON: Thank you. And John

1 Curran?

2 MR. JOHN CURRAN: So concurrent to all

3 that happening, then, over the next five (5) to six (6)

4 years, will the Developer commit to working with the

5 Yellowknives Dene and the North Slave Metis to -- I --

6 I've been trying to figure how to word this -- but to -

7 - to select the best location for the diffuser, to

8 ensure that their traditional knowledge and harvesting

9 practices are taken into account? Thank you.

10 THE CHAIRPERSON: Thank you. I'll go

11 to the Developer.

12 MS. JOANNA ANKERSMIT: Joanna

13 Ankersmit. I'm starting to worry that we're getting in

14 a groove here that I won't be able to get out of. But,

15 yes, I think you heard from even the engineers that,

16 absolutely, that -- that knowledge has to be brought to

17 bear on when we're placing this, but also the city,

18 DFO, our colleagues at Environment Canada, there will

19 be -- have to be more people. But absolutely, it's --

20 it's fundamental that we have engagement with the North

21 Slave Metis and the -- and the YKDFN on that.

22 THE CHAIRPERSON: Thank you. John

23 Curran...?

24 MR. JOHN CURRAN: You know what, Mr.

25 Chairman? I think I'll quit while we're ahead here.

1 No further questions.
2 THE CHAIRPERSON: Thank you. Geez, on
3 Day 4, it's been a long day. I'm hearing good things
4 now. Okay. I'll go to the --
5 MS. JOANNA ANKERSMIT: I'm starting to
6 worry you might --
7 THE CHAIRPERSON: -- Developer.
8 MS. JOANNA ANKERSMIT: I'm starting to
9 worry you might have a new program director when we're
10 done here, but...
11 THE CHAIRPERSON: Okay. Thank you.
12 We've got a little bit behind on our schedule again,
13 but we have to have to be creative, but we'll keep
14 moving. I'm going to go to YKDFN for their
15 presentation. I believe it's twenty (20) minutes long.
16 While they set up, maybe what we could
17 do is we'll just take five (5) minutes.
18
19 --- Upon recessing at 4:15 p.m.
20 --- Upon resuming at 4:25 p.m.
21
22 THE CHAIRPERSON: We're going to go
23 ahead and start with Alternatives North. They said
24 they're going to give us fifteen (15) minutes, so I
25 want to thank them for -- for shortening their time.

(BRIEF PAUSE)

THE CHAIRPERSON: Can I get everybody to their seats, so we can start.

Mr. O'Reilly, you gave us fifteen (15) minutes, so that's good. Thank you.

MR. KEVIN O'REILLY: Thanks, Mr. Chair. It's Kevin O'Reilly with Alternatives North. We have Karen LeGresley Hamre, who's going to make a presentation here for you on some ideas around designations for the Giant Mine site.

Karen is a twenty-nine (29) year resident of Yellowknife. She's a professional landscape architect. She has served on the Gwich'in Land Use Planning Board. And I believe the ideas that she raises her are -- are going to answer some of the -- or, feed into some of the ideas that we heard just a few minutes ago from Mr. Mercredi and Mr. Bayha.

So I just would like to ask Karen to come up and do her presentation. Thank you. Karen LeGresley Hamre

POSITION PRESENTATION BY ALTERNATIVES NORTH - PERPETUAL CARE, RELATED RISKS AND ADAPTIVE MANAGEMENT:

MS. KAREN LEGRESLEY HAMRE: Good

1 afternoon, and thank you. I'm presenting today on a
2 research paper done in March, regarding possible
3 designations for Giant Mine. And there isn't any such
4 thing as a national contaminated site, or an
5 international contaminated site designation, so this
6 research looked more broadly into -- into options.
7 The research was an outcome of the
8 Perpetual Care Workshop held last September. And the
9 group asked for a look at designations. And while
10 designations can have some immediate benefits, the main
11 drive for the research was a way to build institutional
12 and societal memory around the site. And basically
13 designation is one (1) of the ways of implementing the
14 core elements of perpetual care.
15 So first, what really do I mean by
16 designation? The inclusion of Giant Mine in various
17 inventories isn't often thought of as designation per
18 se, but I'm going to include it in today's
19 presentation, because it's an important part of memory
20 and important to the other designations that I'll
21 discuss.
22 I'm including legal designations, such
23 as territorial parks; and commemorative designations,
24 such as a territorial historic site. A commemorative
25 designation is a non-binding assignment, so it could be

1 historic, cultural, environmental land use, that kind
2 of thing.
3 Legal or commemorative; one (1) isn't
4 better than the other. They each have their own
5 purposes. Even if a designation isn't legal it can
6 still provide access to the sharing of ideas, outside
7 funding, and encourage the transmission of
8 understanding of the site to future generations. So in
9 other words, a designation can help us collectively
10 honour, observe, and remember Giant Mine.
11 When we're talking about a perpetual-
12 care situation the "when" question can seem an odd one.
13 In some ways we would have all the time in the world to
14 get around to this, but most of these designations will
15 take years and years to achieve and they require a lot
16 of groups to work together to achieve them. So the
17 work itself of achieving a designation could be an
18 important part of the rehabilitation process.
19 If people do have a designation they can
20 agree to, that can clarify how they work together and
21 why. So including the pursuit of a designation could
22 be part of this first twenty-five (25) year clean-up
23 scenario of Giant. And now is a good time to start the
24 discussion.
25 So I said I'd mention inventories. The

1 -- the Treasury Board secretary maintains the federal
2 contaminated sites inventory, and that's a good place
3 to be because they're the ones looking after federal
4 funds.
5 A key point about the -- the federal
6 inventory is that there are criteria to get into the
7 inventory, but also there's crit -- ways to track
8 contaminated sites.
9 So the federal inventory helps track the
10 progress made in remediation and it compares Giant with
11 other sites across Canada. There are about eighteen
12 thousand (18,000) sites in the inventory, so there's a
13 fair bit of work just in keeping the inventory up.
14 So one (1) simple recommendation is to
15 keep the federal contaminated sites -- sites inventory
16 updated, and updated in the fullest sense of that word.
17 How much of the funding to do that should come from
18 within government and how much from other responsible
19 parties such as indus -- industry is a whole other
20 issue and it was not dealt with in the research paper.
21 I'm going to go through municipal,
22 territorial, national, and international designations
23 separately. However, please keep in mind that the mine
24 could have more than one (1) designation. Indeed, for
25 a site as important as -- as this one, I would expect

1 that ultimately there would be more than one (1).
2 The mine site is, of course, within
3 municipal boundaries. The City of Yellowknife has one
4 (1) type of commemorative designation, and two (2)
5 legal designations that could be applied. My
6 understanding is that the city wants remediation and
7 ownership issues sorted out before pursuing a municipal
8 designation. However, even lacking a municipal
9 designation, the city would be a key partner in working
10 toward any of the other designations that I'm going to
11 discuss.
12 A territorial heritage park could be a
13 legal option, but as it -- as it commemorates
14 significant cultural or historic buildings and built
15 environments. However, I believe a territorial
16 historic site, which is a commemorative designation may
17 be a better fit.
18 Territorial historic sites are places or
19 events that are honoured because they hold a special
20 link to the past of the NWT. Sites need to be at least
21 fifty (50) years old and have kept the characteristic
22 that makes it historic and have the owner's consent.
23 The designation aims to document the heritage of these
24 places for present and future generations to enjoy.
25 This brings up an indest -- interesting point about how

1 do we designate for something that has negatively
2 impacted many people and has the potential to
3 negatively impact countless future generations?
4 We need to consider that there are many
5 perspectives and stories to weave together in any
6 designation. These include stories of gego --
7 geological science exploration, frontier mining, and
8 developing an extremely multi-cultural capital city.
9 So a historic site, or this site, can be
10 a place to enjoy in the future even as it provides both
11 celebratory elements and cautionary tales about our
12 past.
13 I'll just go a little further into the
14 negative side of Giant Mine.
15 A national historic site assignment can
16 be used for a disaster area if it meets two (2) main
17 criteria. First, there needs to be a change to policy
18 or laws that was caused by or as a result of the event.
19 And secondly, that change needs to be at least forty
20 (40) years old.
21 The GNWT did change the Commissioner's
22 Land Act in 2010, largely as a result of the lack of
23 financial security held by the GNWT for Giant's surface
24 lease. Clearly that's not forty (40) years old, but
25 there could be other legal changes as we've -- as we

1 fully learn the lessons of Giant Mine, and in the
2 future this could be an option.
3 A -- a legal avenue that could be
4 pursued is a withdrawal under the Territorial Lands
5 Act. This is a way of legally restricting activities
6 on a site. It's done by federal order -- order in
7 council and it -- a withdrawal could continually flag
8 this area to Developers; another way of remembering.
9 International designations are all
10 commemorative. They all deal with larger landscapes,
11 and are all more complicated and lengthy than
12 municipal, territorial, or national designations, but
13 there's basically no immediate jump to the
14 international stage. Some fire -- former pri -- some
15 prior form of designation is most usual.
16 World Heritage sites and Biosphere
17 Reserves are two (2) international designations
18 conferred through UNESCO. They don't seem to be
19 particularly suited for Giant Mine at this point.
20 Again, perpetual care is a long time and maybe there --
21 they will be more applicable in the future.
22 A better immediate fit is a local
23 geopark. UNESCO gives support to the National Geopark
24 Initiatives which are coordinated through a local
25 geopark network. Right now we have only one (1) global

1 geopark in Canada, it's called Stonehammer, in New
2 Brunswick. The park includes several sites such as the
3 Fundy Trail Parkway, Irving National Park, New
4 Brunswick museum, and the Reversing Falls.
5 A geopark is meant to stimulate
6 sustainable economic activity, it isn't meant to be
7 off-limits like some park's designations. So it's
8 meant for the area to be used. Giant Mine and the
9 surrounding area could meet the criteria for a global
10 geopark.
11 Part of becoming a global geopark is
12 having an effective management system and program of
13 implementation. So again, this is an example of where
14 a designation could help meet the elements of perpetual
15 care.
16 The NWT Mining Heritage Society has an
17 interest in such a designation to highlight the
18 importance of the Yellowknife area in general to mining
19 in the North.
20 Any of the designations could help build
21 institutional and societal memory. To me, this also
22 means daily remembering is needed, not just every once
23 in a while. I included in the research paper ideals --
24 ideas for daily remembering. Such ideas may or may not
25 be associated with any particular designation and not

1 all of these ideas have to do with the project
2 proponents. However, taking up with the point raised
3 by the Review Board Members earlier, I'll just
4 highlight the point of including something about Giant
5 Mine in the school currip -- curriculum, which is a
6 GNWT responsibility.
7 Developing themes about Giant Mine that
8 can fit into the curriculum at various grades is
9 recommended. Besides developing materials appropriate
10 for different age groups, coming at Giant from
11 different subject lenses would also be useful.
12 Northern studies, chemistry, local history and so forth
13 are different ways to enter the story. This does not
14 and should not wait for a designation to be pursued.
15 These last two slides summarize the
16 recommendations from the research paper. Some of the
17 ideas are easier to accomplish more immediately than
18 others, but the key is we need to start the discussion
19 and keep the future in mind.
20 There are others that are involved in
21 the struggle of addressing how best to do rem --
22 remediation, and so research into implementing any of
23 these ideas is important. All of these are
24 considerations for incorporating the Giant Mine, its
25 liabilities and lessons, into our social psyche.

1 The proponents did say earlier on this
2 is a great opportunity for the community to build
3 something of value for the future. And recommendations
4 for a designation from the research paper could be
5 added to the current project description.
6 Thank you for your attention, and I look
7 forward to the discussion.
8 THE CHAIRPERSON: Okay. Thank you.
9 What we have left is we have a presentation from YKDFN.
10 We got -- they agreed to do it in twenty (20) minutes.
11 And then North Slave Metis in -- from thirty (30) to
12 ten (10).
13 So -- but I've -- I think -- I just
14 polled the Board Members here and I think everybody is
15 pretty well exhausted, I think, right around the table
16 here, and I imagine everybody else in the room. So
17 tomorrow morning we want to come back at eight o'clock
18 because it's a Friday and there are people who want to
19 leave. So we'll -- and then we'll start it -- and
20 we'll have a half hour lunch, as well.
21 And so tomorrow morning between 8:00 and
22 9:00 we will finish off YKDFN, which is going to take
23 twenty (20) minutes, and North Slave Metis in ten (10)
24 minutes. And there will be questions in there.
25 So -- and then at nine o'clock we'll

1 continue on with the agenda. But the only thing is
2 that the last few days that we -- we just haven't been
3 starting on time. And so tomorrow morning I'd like to
4 start right at eight o'clock sharp, and we'll just have
5 a quick prayer then we'll continue on with the
6 presentation.
7 And then at 9:00 we'll continue on the
8 agenda for Friday. And then a half hour for lunch so
9 we could -- just in case we get behind on some of the
10 questions.
11 So I -- I think what we'll do is we'll
12 stop there. I want to thank Alternatives North for
13 their presentation, and then if there's questions we're
14 going to hold off those questions until tomorrow
15 morning.
16 So what I'll do now though is that I --
17 I would like to -- there's some members of the public
18 here. There's some members of the public here. I'd
19 like to ask them to come up and introduce yourself,
20 that want to talk about the Giant Mine remediation
21 project. And I think we'll go until 5:00. If -- and
22 if there's nobody here then we'll -- we'll shut down
23 for the day.
24
25 (BRIEF PAUSE)

1 THE CHAIRPERSON: Okay. Thank you.
2 Again, the people that -- that are going to come up to
3 talk about the Giant Mine Remediation Project, again,
4 we're just limited on time.
5 So first who I have is Lori Sarkad. If
6 you could come up.
7
8 PUBLIC COMMENTS:
9 MS. LORI SARKAD: Okay. Thank you very
10 much. This is very short, I promise. I'm happy to
11 have this chance to speak about this issue, because
12 it's really dear to a lot of Yellowknifers. And I've
13 been sitting here all day and kind of watching
14 democracy in action and it makes me happy. I don't
15 think we should take this for granted that we're able
16 to have this type of discussion, all these groups
17 together, everybody working towards the same ultimate
18 goal.
19 I've lived along Ingraham Trail and
20 driven past Giant Mine nearly ever day for the past
21 twenty-two (22) years. During that time I've smelled
22 the roaster, I've been overcome by fumes, I've watched
23 the violence unfold during the strike, I've watched
24 Baker Creek be repeatedly realigned, and throughout it
25 all I've always -- always been concerned about the

1 arsenic.

2 On a windy day I can see sheets of white

3 contaminated dust blow up from the northeast tailings

4 pond and this has been going on for years, undeterred.

5 And I can only imagine how far and wide it has blown,

6 how many animals, insects, birds, fish, plants, and

7 trees have ing -- ingested it and how many people

8 unknowingly have been exposed to it.

9 While I have not been responsible for

10 the contamination left behind, I apologize to the

11 people of Dettah and N'Dilo, who have seen their

12 traditional lands poisoned in such a way and who have

13 lost relatives because of it. I feel strongly that a

14 formal apology and compensation to these people for the

15 seemingly irreversible desecration of their traditional

16 lands should be part of this remediation process.

17 I'm heartened to see that the

18 remediation plans include covering the tailings ponds,

19 but I question why this hasn't been done years ago.

20 Once covered, I hope the tailings are regularly

21 inspected and that the soil and water sampling

22 continues for any trace of uptake into vegetation or

23 the water table, not just for five (5) years, but part

24 of this perpetual-care program. So that would be

25 forever.

1 I also feel that an environmental
2 concern of this magnitude and scope should have a
3 robust monitoring system that is overseen by local
4 people and experts who are independent of the
5 Developer. I mean this in no disrespect to the many
6 hardworking civil servants and professionals who are
7 developing the care and maintenance program for Giant
8 Mine. Surely every one of us here is trying to do
9 right by the environment and the taxpayers, but I have
10 little faith in this current feder -- federal
11 government's approach to mother earth. It has
12 repeatedly pursued a watering down, not a stepping up,
13 of environmental law and regulation.
14 I want higher standards of stewardship
15 for our water, land, air, and wildlife, but, beyond my
16 own personal and political observations, an independent
17 oversight process is necessary and justifiable,
18 regardless of who is in power in Ottawa, just as there
19 have been repeated calls for such a body to oversee the
20 RCMP. This is because it just makes good sense.
21 We have two (2) such systems in place
22 now overseeing our diamond mines, and one could argue
23 that the Giant arsenic is a far greater environmental
24 threat. Given that so many millions, and eventually
25 billions, and probably some day trillions of dollars

1 will be spent in perpetual care of this site, I feel it
2 would be money well spent to ensure it is done
3 properly, by people who live close to the problem and
4 have the most at stake.
5 I was happy to hear this morning that
6 there are plans for a detailed records management
7 system. I hope this system is transparent and easily
8 available to anyone, individuals or media, that want to
9 keep abreast of the project.
10 I know there are very hopeful plans to
11 reclaim the mine site and make it useful, and even
12 enjoyable again. I have often won -- wondered why the
13 entire contaminated site has not had any signage
14 warning people of the potential hazards there. I saw
15 one (1) sign, I think, last year on Baker Creek, just
16 for a short while, for -- warning people not to fish,
17 but, other than that, you know, you can just wander
18 around there and not know.
19 I hope the public can remain well aware
20 of the history of this site and the potential threats
21 it poses. There needs to be very accurate and
22 accessible information on what lurks beneath the
23 ground, and attention should also be given to ensuring
24 that the frozen block remains a secure area that can
25 never be tampered with.

1 Because forever is a very long time, I
2 feel the remediation plans need to be proactive at
3 finding a better solution than the frozen block. The
4 ultimate goal should be removal or some sort of
5 deactivation of its potential to contaminate the water
6 -- the watershed. Towards that, research and
7 development in this area should be encouraged and
8 funded by the federal government.
9 Thank you to everyone here for -- for
10 your time and attention that you are putting towards
11 finding the best possible way to deal with this very
12 real problem. I think Giant Mine is a prime example of
13 how not to ever do business, and why we need the
14 strongest, most stringent environmental laws possible.
15 It should be very apparent through the poisonous legacy
16 of Giant Mine, that monster underground, that cutting
17 corners to make the most money, especially when it
18 comes to the environment, does not pay in the long run
19 for anyone on any level.
20 So thank you for your time, and I wish
21 everyone all the best in your deliberations this week
22 and beyond forever, I guess. Thank you.
23 THE CHAIRPERSON: Thank you, Lori
24 Sarkad. Thank you for your presentation. Masi.
25 Next one I have is Kathy Racher. She's

with the Wek'eezhii Land and Water Board.

(BRIEF PAUSE)

THE CHAIRPERSON: I think you signed on the wrong sheet. Well, Ian Gilcher -- Gilcrest.

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. I -- is this -- thank you. There's one (1) more person on the list here that I can't read, but if -- they're from the public and they wanted to do a presentation. Anybody here? And then we'll do Dr. Gilcrest tomorrow.

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. If not, I don't see anybody else. Does anybody in the public want to make a comment on -- regarding Giant Mine remediation project?

(BRIEF PAUSE)

THE CHAIRPERSON: Okay. If not, I'm

1 going to stop there. We're going to come back tomorrow
2 morning at eight o'clock.
3 I'd like to give a -- maybe an Elder,
4 Eddie Tsee (phonetic), could you come up to do closing
5 prayer.
6 And just for you information, the bus
7 for Dettah is here, the shuttle, so anybody who needs a
8 ride, it's outside.
9
10 (CLOSING PRAYER)
11
12 THE CHAIRPERSON: Okay. So tomorrow
13 morning, eight o'clock. Not Dene time, right on the
14 clock. Thank you.
15
16 --- Upon adjourning at 4:53 p.m.
17
18 Certified correct,
19
20
21
22 _____
23 Lorraine Douglas, Ms.
24
25

G