



MACKENZIE VALLEY ENVIRONMENTAL

IMPACT AND REVIEW BOARD

PUBLIC HEARING

NICO PROJECT - EA 0809-004

FORTUNE MINERALS LIMITED

Mackenzie Valley Review Board Staff:

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

HELD AT:

Yellowknife, NT

August 29, 2012

Day 2 of 4

## 1 APPEARANCES

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3	Paul Mercredi	)
4	Simon Toogood	)
5	Shannon Hayden	)
6	Alan Erlich	)
7	Stacey Menzies	)
8	Cailin Makin	)
9	John Donihee	) Board counsel
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11	Mike De Carlo	) Fortune Mining
12	Jim Mucklow	) Limited
13	Robin Goab	)
14	Tom Rinaldi	)
15	Rick Schryer	)
16	Pat Moloney	)
17	Bill Shepard	)
18	John Faithful	) Golder
19	Lasha Young	)
20	Theresa Repaso-Subang	)
21	Rein Jaagumagi	)
22	Jason Parviainen	)
23	Ken De Vos	)
24	Ken Bocking	)
25	Letha MacLachlan	) Counsel

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3	Edward Erasmus	)
4	Alfonz Nitsiza	)
5	Edward Chocolate	)
6	Charlie Football	)
7	Marjorie Matheson-Maund	)
8	Ryan Chenkie	)
9	Joseph Judus	)
10	Laura Duncan	)
11	Kerri Garner	)
12	Dr. Ginger Gibson	)
13	Henry Zoe	)
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15	Glen Koblun	) Ducks Unlimited
16	Jason Charlwood	)
17	Lori (phonetic) Mountain	)
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19	Monique Haakensen	) Contango Strategies
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21	Bill Enge	) North Slave Metis
22	Susan Enge	) Alliance
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24	Scott Duke	) Justice Canada
25	Jason Steele	)

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3	Bernard Park	) GNWT
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5	Loretta Ransom	) ENR
6	Kimberly Balsillie	)
7	Aileen Stevens	)
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9	Todd Slack	) YKDFN
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11	Carey Ogilvie	) Environment
12	Sarah-Lacey McMillan	) Canada
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14	Sarah Olivier	) DFO
15	Rick Walbourne	)
16	Bev Ross	)
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18	Kate Witherly	) Northern Projects
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21	Kathy Racher	) WLWB
22	Brett Wheler	)
23	Sara Elsassar	)
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1 APPEARANCES (Con't)

2

3 Douglas Soloway ) Transport Canada

4 Dale Kirkland )

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6 Rob Johnstone ) Natural Resources

7 ) Canada

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9 Nathen Richea ) AANDC

10 Robert Jenkins )

11 Paul Green )

12 Myranda Bolstad )

13

14 Ross Mitchell ) ERM

15

16 Greg Short ) Canadian Dewatering

17

18 Sandy Lee ) Government of

19 ) Canada

20

21

22

23

24

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1 --- Upon commencing at 9:14 a.m.

2

3 THE CHAIRPERSON: Good morning. Good  
4 morning. Can everybody hear me? Okay, I'm going to  
5 call the Nico project EA0809-004 to order. It's 9:15.  
6 Before we start I'm going to start off with an opening  
7 prayer by an Elder. I'm going to ask Louie Zoe, from  
8 Gameti, to come up and do the opening prayer.

9

10 (OPENING PRAYER)

11

12 OPENING REMARKS FROM CHAIRPERSON OF REVIEW BOARD:

13 THE CHAIRPERSON: Good morning. I want  
14 to make the Chairman's opening comments. I'd like to  
15 welcome everybody here today for this public hearing.  
16 My name is Richard Edjericon. I'm the Chair for the  
17 Mackenzie Valley Environmental Impact Review Board. We  
18 are here to listen to what you have to say about the  
19 Nico Project. The developers is Fortune Minerals  
20 Limited.

21 Fortune proposed to construct and  
22 operate a closed cobalt, gold, and bismuth and copper  
23 mine. The mine will be underground for approximately  
24 ten (10) months, followed by an open pit operation for  
25 a total of twenty (20) years of production. The

1 development includes construction and operation of a 27  
2 kilometre Nico project access road, to be built by  
3 Fortune Minerals.

4 We have reached one (1) of the final  
5 stages of the environment assessment. The public  
6 hearing, in tr -- I may have to stop for one (1)  
7 second. I'm missing page 2.

8 While that's happening, I'll get page 2  
9 of that, just a quick housekeeping item. In the back,  
10 we have the exits. We have the washrooms in the back,  
11 so that you know where -- where to go. Also, in the  
12 channel 4 on your listening device, we have the -- the  
13 Tlicho on channel number 2, in English number 4. So,  
14 just so that we have that. And my apologies, here. I  
15 think somebody misplaced page number 2 of my speech  
16 here.

17 Also, while that's coming I just wanted  
18 to let everybody know that if you could put your  
19 cellphone -- either shut it off or put it on vibrate  
20 and -- so that there's no interruptions here today with  
21 the Board and nor the presenters.

22

23 (BRIEF PAUSE)

24

25 THE CHAIRPERSON: And also on the

1 agenda that we have, just to let you know that we're  
2 all on a time limit. So this morning we started off a  
3 li -- a little late. We had a little bit of problem  
4 with the telephone lines this morning, but I believe  
5 that's now fixed. And also, in the presentations, when  
6 we come up to do the presentation, we need to make sure  
7 that you say your name and who you represent.

8                   And for the opening statements by  
9 parties, I'll give you three (3) to five (5) minutes.  
10 And as we go into the presentations a little bit later  
11 on as well, I'm going to say that if -- if we're -- we,  
12 again, we have a time schedule here. I'm trying to  
13 keep to it. And if we're getting over our time limit,  
14 I'll give you a five (5) minute warning, down to one  
15 (1) minute, just so that we don't -- we had this  
16 problem the other day. And we -- and, again, I just  
17 want to emphasize the importance of keeping the  
18 schedule here. And so...

19

20                   (BRIEF PAUSE)

21

22                   THE CHAIRPERSON:     Okay. Thank you.  
23 Okay. Just going back to the headsets, English is now  
24 number 6. Okay. I'll just continue on. I've read the  
25 -- the first page of these opening comments.

1                   Again, I'll just mention for the record  
2 that we -- the Review Board notes that the hearing  
3 dates were changed from the original schedule and  
4 acknowledge the inconvenience that the reschedule may  
5 have caused the community of Whati and the -- Behchoko  
6 and here in Yellowknife. Steps have taken -- have been  
7 taken to ensure this does not happen again.

8                   Today the Board wishes to hear the views  
9 and opinions that members of the community of  
10 Yellowknife may have regarding this proposed  
11 development. This community hearing is informal and it  
12 is intended to be dis -- distinct from the more formal  
13 hearings in Yellowknife and Behchoko later this week.

14                   Over the course of the day we'll ask  
15 that you do your best to help the Review Board to  
16 understand your views about the proposed developments,  
17 potential environmental impacts, social impacts,  
18 sociocultural, and your views of the potential  
19 significance of these im -- impacts.

20                   So the Review Board will fully consider  
21 these views while it's deliberating on its decision in  
22 this environmental assessment. Once the decision is  
23 made the Board will write it down in the report of the  
24 environmental assessment and send it to the Minister of  
25 Aboriginal Affairs and Northern Development for

1 consideration.

2 Before we go any further I'd like to  
3 introduce our Board members and then introduce the  
4 staff and counsel. So to my far right I have Board  
5 member Mr. John Curran. I have Mr. James Wah-shee, Mr.  
6 Richard Mercredi. To my left is Mr. Danny Bayha, Ms.  
7 Rachel Crapeau, and Mr. Percy Hardisty. To my far left  
8 over here I have Mr. John Donihee, legal counsel, and I  
9 also have Kathy Racher and Brett Wheler.

10 And those are the staff that I have here  
11 today. Around you're probably going to see other staff  
12 roaming, so -- they're in the back. And I have Alan  
13 Ehrlich and Mr. Toogood, John -- and Chuck Hubert, who  
14 also has the file for this public hearing.

15 I'm going to go to the Tlicho, if you  
16 could introduce your delegation. I'm going to go to  
17 the Grand Chief Eddie Erasmus.

18

19 (BRIEF PAUSE)

20

21 GRAND CHIEF EDWARD ERASMUS: Masi, Mr.  
22 Chair. Introductions: I have around the table all the  
23 four (4) chiefs for the community. I'm Grand Chief  
24 Eddie Erasmus. I have Chief Alfonz Nitsiza, Whati;  
25 Chief Edward Chocolate from Gameti; and Chief Charlie

1 Football from Wekweeti, Chief Clifford Daniels from  
2 Behchoko.

3 And I also have staff -- or legal  
4 counsel and staff, Ginger Gibson also. And I have  
5 Elders -- Elders working group and -- and TK working  
6 group and -- and those people sitting here behind me.  
7 Masi, Mr. Chair.

8 THE CHAIRPERSON: Masi, Grand Chief  
9 Eddie Erasmus. I'll go to the middle table here. I'll  
10 go to Mr. Bill Enge.

11 MR. BILL ENGE: Thank you, Mr.  
12 Chairman, and I wish to thank the Board for putting  
13 together this presentation. My name is Bill Enge. I  
14 am the President of the North Slave Metis Alliance and  
15 I am here with my sister who is assisting me with  
16 today's presentation.

17 And, of course, the entire North Slave  
18 Metis Alliance community is very interested in what is  
19 going to take place here today. And I appreciate the  
20 opportunity to be here and be heard by this Board.  
21 Thank you.

22 THE CHAIRPERSON: Thank you, Mr. Bill  
23 Enge. I'm going to go to Fortune Minerals.

24 MR. RICK SCHRYER: Rick Schryer,  
25 Fortune Minerals. Thank you, Mr. Chairman. I'm not

1 going to introduce everybody that's here. I'll just  
2 introduce our main table. To my right is Dr. Monique  
3 Haakensen, with Contango Strategies Limited. To my  
4 left is John Faithful, with Golder Associates. They're  
5 going to be talking about water and wetland treatment  
6 today.

7 Behi -- directly behind me is Letha  
8 MacLachlan, our legal counsel. Oh, just off to --  
9 behind me and off to my left is Glen Koblun from Ducks  
10 Unlimited, and Tom Rinaldi, VP operations. We also  
11 have a number of consultants behind us. I won't  
12 introduce them. But we have all the technical  
13 expertise in place to be able to answer today's  
14 questions on water quality and closure.

15 And I'll leave it that. Thank you.

16 THE CHAIRPERSON: Thank you. Again,  
17 just the lady in the back here, her name is -- that's  
18 transcribing is Lorraine Douglas. And -- and she asks  
19 that anytime that somebody comes to the mic, introduce  
20 yourself and who you represent and say your name just  
21 so that we have that for the record.

22 I'll continue on. The Review Board  
23 again is a co-management body established by the  
24 Mackenzie Valley Resource Management Act that makes its  
25 decision -- oh sorry, decisions by consensus.

1 Our members are northerners nominated by  
2 First Nations and by the Tlicho and Territory federal  
3 governments. Our goal is to make decisions that will  
4 benefit the north for all residents and the future for  
5 future generations.

6 I have some additional comments on  
7 today's proceedings that I hope will help make sure  
8 everything goes smoothly. We have limited time. The  
9 Review Board wants to hear what you have to say.

10 Please note that there is an agenda for  
11 this hearing which is avail -- available at the door.  
12 I ask that everyone respect the time allotted for  
13 presentation and questions and use their time  
14 effectively.

15 The Review Board will be producing an  
16 official transcript of this hearing. The transcript  
17 will be available through our website and the public  
18 registry for this environmental assessment.

19 The community hearings will be informal  
20 and will proceed as follows. Fortune Minerals will  
21 give presentation first. After they gi -- after they  
22 have given the presentation, community members and --  
23 will have an opportunity to ask questions.

24 So there will be -- so anyways, we will  
25 proceed. The way we have it laid out today, we're



1 going to go to Fortune Minerals to do their  
2 presentation. But before we do that, I'm going to ask  
3 that we give three (3) to five (5) minutes for opening  
4 statements by parties. And I'll call them up. And if  
5 you could come up to the table.

6 And we're going to ask you your  
7 statements for this file. And then if you could please  
8 sit down. And we're going to get other parties to come  
9 up and make their statements. And then once everybody  
10 has an opportunity to do that, then we'll proceed into  
11 the hearing.

12 Again, this is -- for the record, this  
13 hearing is a formal public hearing on Fortune Nico  
14 Project EA809-004, for the record. Okay, so we're  
15 going to go to the opening statements first by parties,  
16 the way I have it laid out.

17 And I'm going to ask Fortune Minerals,  
18 the Tlicho Government, and the Yellowknives Dene First  
19 Nation, Akaitcho IMA office, North Slave Metis  
20 Alliance, Fisheries and Oceans Canada, Government of  
21 Northwest Territories, Aboriginal Affairs and Northern  
22 Development Cana -- AANDC, Environment Canada, Trans --  
23 and Transport Canada and Natural Resources Canada, in  
24 that order.

25 So I'm going to have -- you got three

1 (3) to five (5) minutes for opening statements. And  
2 then we'll continue in that order. So I'm going to go  
3 to Fortune Minerals for your short three (3) to five  
4 (5) minute statement. Fortune Minerals.

5

6 OPENING STATEMENT BY FORTUNE MINERALS:

7 MR. RICK SCHRYER: Rich Schryer,  
8 Fortune Minerals. Thank you, Mr. Chairman. Our -- as  
9 stated in the overall agenda for these public hearings,  
10 our formal opening statements will be made by our  
11 president, Robin Goad, tomorrow in Behchoko when he's  
12 able to attend. So I'll hold off on any statements in  
13 that respect.

14 Today, just to set the stage, we're  
15 going to be giving our water quality presentation, a  
16 shortened version of it, which is at the request of the  
17 Board, since they've already seen it in Whati. We're  
18 going to focus on wetland treatment and how that would  
19 proceed, because we know from talking to various  
20 parties that that's where a lot of the questions lie.

21 I do encourage people to take a look at  
22 the models that we've set up at the back near the door.  
23 They do give a very good idea of what the project looks  
24 like, of its relationship to the distance to Hislop  
25 Lake and where the water flows. So please take a

1 chance and have a look at the models if you get a  
2 chance. I think they're worth having a look at.

3 I'll leave it at that, Mr. Chairman, and  
4 let the other parties speak.

5 THE CHAIRPERSON: Thank you. I'm going  
6 to go to the Tlicho government for your opening  
7 statements. You've got three (3) to five (5) minutes.

8 DR. GINGER GIBSON: Just to clarify,  
9 Mr. Chair, we're going to have two (2) statements this  
10 morning, because there was supposed to be opening  
11 statement by our Tlicho Chief, followed by our opening  
12 comments. So we'll just have a brief statement by  
13 Tlicho Chief Eddie Chocolate, followed by our opening  
14 statements. Masi.

15 THE CHAIRPERSON: Okay. Please  
16 proceed.

17

18 OPENING STATEMENT BY TLICHO GOVERNMENT:

19 CHIEF EDWARD CHOCOLATE: Thank you, Mr.  
20 Chair. My name is Edward Chocolate, Chief of Gameti,  
21 and also with Tlicho Government. Mr. Chair, you may  
22 have noticed that most of the Elders are not here.  
23 There's a funeral today in Behchoko, and out of respect  
24 for the family, the Elders have chosen to stay back  
25 home for the funeral.

1                   And, Mr. Chair, you might hear it said  
2 most of the people living in this area come from  
3 Gameti. It is true today things are very stable for  
4 our families. They use that area. It's called (NATIVE  
5 LANGUAGE SPOKEN) or 'Where we can survive for fishing,  
6 camping, hunting, and trap lines'.

7                   Our Gameti families live in that area of  
8 the proposed mine, and came from that area. The  
9 history of the Gameti people all come from K'ia Goti.  
10 Most of the people living in Gameti live from the mouth  
11 of the Marian River all the way to Sahtu. Most of the  
12 families, even mine, have our roots in Hislop Lake.  
13 All the major families in Gameti are from Hislop Lake.  
14 Much of the knowledge of this area comes from these  
15 families.

16                  And my grandfather raised his family  
17 there, and also my dad raised our family there, and  
18 that's where we came from. We have our roots there,  
19 deeply embedded of traditional culture, our way of  
20 life. And my dad taught us a lot of the cultural --  
21 and that area, it's a place where it's full of abundant  
22 of wildlife, fish, and that's how our people survive  
23 there. And -- and that's -- that's where we want our  
24 children to know that area, to know that we were raised  
25 there, let them travel through that area.

1                   And also, Mr. Chair, we have a lot of  
2 great concern with this proposed mine. The environment  
3 is of great concern and the wildlife, and don't want to  
4 be hurt by the contamination.

5                   Since so many families live there, our  
6 water needs to be protected for drinking water and for  
7 the fish. The Tlicho agreement requires that water is  
8 protected. We want the water to be protected in the  
9 lakes and the rivers that we use, all the way to Deto  
10 Tia, or Burke Lake, as you call it in English. That  
11 water goes all the way to Behchoko. It is the water  
12 for all those families downstream.

13                  Mr. -- Mr. Chair, things are very stable  
14 for our families. We want them to stay that way in  
15 this important area. Masi cho.

16                  THE CHAIRPERSON: Masi, Chief  
17 Chocolate. I just want to say our condolences to the  
18 family again on behalf of the Review Board and the  
19 community of Behchoko, and the -- Gameti as well.

20                  I'm going to continue on to the Grand  
21 Chief, the -- oh, sorry, Chief Daniels.

22                  CHIEF CLIFFORD DANIELS: Masi, and good  
23 morning, Mr. Chair. I first would like to thank the  
24 Yellowknives Dene, N'dilo and Dettah for having our  
25 meeting in traditional -- their traditional territory

1 today. And also masi to the Review -- Review Board for  
2 listening to all the parties involved this week.

3 Our relationship with the land and water  
4 and the animals is who we are. It is our way of life.  
5 The Constitution tells us to preserve and protect and  
6 promote this way of life for all Tlicho today, and for  
7 fr -- future generations. For those of you who are  
8 interested, this is found in Section 2 of our  
9 Constitution.

10 In these hearings, we will speak of our  
11 knowledge of the project area and help you understand  
12 the important connection we have to the full region in  
13 which the mine is located. This area we call (NATIVE  
14 LANGUAGE SPOKEN), or in English, 'A place where we can  
15 survive'.

16 We want to add to the body of the  
17 scientific and traditional knowledge and share our  
18 concerns and recommendations. We also want to listen.  
19 The Tlicho government wishes to increase our  
20 understanding of this potential risk and benefits of  
21 this proposed development.

22 The community hearing in Whati brought  
23 out very important messages. There is a strong public  
24 concern, Mr. Chair, about this project in the Tlicho  
25 region. We had a late start in Whati. We still had

1 many people who spoke about the proposed project. We  
2 know there are many other people, young and old, who  
3 wanted the opportunity to speak more on this proposed  
4 mine.

5                   We conducted our own technical risk  
6 assessment in preparation for these hearings, issued as  
7 technical reports, and we gave a very high risk rating  
8 to the social and economic impacts and to the closure  
9 uncertainties associated with this proposed mine.

10                   Two (2) major experimental technologies  
11 are being tested in the Tlicho region, co-disposal and  
12 wetlands treatment. We have studied these carefully  
13 and we see major uncertainties with the implications of  
14 these technologies for the Tlicho land. The  
15 recommendations you will hear from us today are  
16 intended to deal with those uncertainties.

17                   Mr. Chair, we are working hard to  
18 complete our traditional knowledge study by the  
19 September 15th deadline. We will be sharing  
20 preliminary findings with you in our sessions tomorrow.  
21 And we know you will -- the Review Board will consider  
22 this traditional knowledge that will be made available  
23 to you.

24                   The land that we are dealing with is a  
25 body that nourishes us. The traditional knowledge is

1 the head of that body. There is no separation of our  
2 knowledge from our land. Our Elders are going to share  
3 with you about this are, (NATIVE LANGUAGE SPOKEN).  
4 It's a -- it's an area of great importance for the  
5 Tlicho people and their survival.

6                   When our Elders refer to K'ia Goti, they  
7 refer not only to the lake itself, but the surrounding  
8 area where they harvest, hunted, fish, trap and gather  
9 traditional medicine, which include the mine site. It  
10 is a landscape that is connected with our oral culture  
11 and the site itself is in the heart of the Tlicho  
12 lands.

13                   We will be asking for a strong  
14 protection of the Deto Tia, or Burke Lake, as we use  
15 that area. We will also be asking questions of pa --  
16 parties on quality, air quality, because our  
17 traditional knowledge work has  
18 shown us that traditional mis -- medicines are gathered  
19 right in the area of the proposed mine site.

20                   We will question about the closure plan,  
21 because we see uncertainties with the wetlands  
22 treatment. Water is life, and we fought hard for the  
23 protection -- protection found in Tlicho agreement.  
24 This confirms the Tlicho First Nation has the right to  
25 no change in quality, quantity, rate of flow of waters



1 that flow through our lands.

2 Our recommendations about water quality  
3 supports those words. As I think about mines like  
4 Rayrock, Colomac, Giant, together we need to learn from  
5 the past and set a precedent for the future. Masi Cho.

6 THE CHAIRPERSON: Thank you. Those  
7 are the two (2) presentations by the Tlicho Government.  
8 Thank you for your presentation.

9 For your next one (1) I'm going to go to  
10 the Yellowknives Dene First Nation for statements for  
11 three (3) to five (5) minutes. Can you introduce  
12 yourself, please?

13

14 OPENING STATEMENT BY YELLOWKNIVES DENE:

15 MR. TODD SLACK: Thanks, Mr. Chair.  
16 Excuse me. My name is Todd Slack. I'm the resource  
17 person for land and environment with the Yellowknives  
18 Dene. It's a pleasure to be here.

19 In terms of the perspective that was  
20 brought to this file, the foundation for the  
21 Yellowknives is the Treaty. It's worth stating right  
22 up front that the Yellowknives Dene have not  
23 extinguished treaty rights to hunt and trap throughout  
24 their territory and are concerned about potential  
25 impacts to those rights.

1                   The secondary concern that we brought to  
2 the file was the potential to establish unacceptable  
3 precedents for operations that are occurring in the  
4 Chief Drygeese territory, which as we all know is home  
5 to three (3) additional mine proposals.

6                   Now, a number of years ago YKDFN and  
7 Tlicho Government signed an overlap agreement on the  
8 management of resources, and the Yellowknives Dene  
9 strongly believe the loudest voice in this decision-  
10 making process should be Tlicho Government.

11                  This is their land, they know it best.  
12 This mine proposal is at the heart of their territory  
13 and the Yellowknives Dene have the greatest respect for  
14 that. We are here to consider if and how this mine  
15 should go ahead.

16                  However, the one (1) thing that's  
17 lacking is the voice of the Tlicho Government agreeing  
18 that this project should proceed. Until that is in  
19 place this project will never have the appropriate  
20 social licence in the Yellowknives Dene view.

21                  However, Yellowknives Dene have made  
22 some recommendations if this project were to proceed.  
23 There's a long history of development in the Chief  
24 Drygeese territory. All three (3) mines -- all three  
25 (3) diamond mines are in the Chief Drygeese territory

1 and there's a hundred contaminated sites from past  
2 mining operations.

3                   We have a good idea on what works and  
4 what doesn't work, both over history and in terms of  
5 the current regulatory system. The Yellowknives Dene  
6 position is based on this experience. It is not based  
7 on ideals or idle wishes. It is grounded in fifteen  
8 (15) years of history since the MVRMA was introduced.

9                   We have witnessed impacts to the land  
10 and our recommendations are aimed at addressing this  
11 issue. Everyone here is trying to bring about the best  
12 outcome. There's a number of competing priorities.

13                   The developer wants to exploit the  
14 resource with a minimum of environmental destruction.  
15 The parties want to ensure that the benefits outweigh  
16 the damage without compromising the future, and  
17 everyone wants to ensure that the site does not have a  
18 legacy in the same manner that Colomac, Discovery, or  
19 Giant did.

20                   The Yellowknives have focussed their  
21 recommendations to try and help ensure that the impacts  
22 will be within expectations and that the mineral  
23 exploitation process will not compromise the  
24 sustainability of the lands. Thanks very much.

25                   THE CHAIRPERSON:       Thank you, Todd

1 Slack, YKDFN. I'm going to go to the Akaitcho IMA  
2 Office. Any representation here?

3

4 (BRIEF PAUSE)

5

6 THE CHAIRPERSON: It doesn't look like  
7 it. I'm going to continue on. I'm going to go to the  
8 North Slave Metis Alliance for your brief three (3) --  
9 three (3) to five (5) minute presentation.

10

11 OPENING STATEMENT BY NORTH SLAVE METIS ALLIANCE:

12 MR. BILL ENGE: Thank you, Mr.  
13 Chairman, ladies and gentlemen, Elders, and interested  
14 parties. And we want to thank the Mackenzie Valley  
15 Review Board for this opportunity to make opening  
16 remarks.

17 As you heard, my name is Bill Enge and I  
18 am the president of the North Slave Metis Alliance, or  
19 as also known as the NSMA. The NSMA is always ready  
20 and willing to consult and discuss projects such as the  
21 Fortune Minerals Limited Nico project.

22 The NSMA represents the aboriginal  
23 rights- bearing Metis of the Great Slave Lake area who  
24 use and exercise their aboriginal rights primarily in  
25 the area north and east of Great Slave Lake, Northwest

1 Territories.

2                   With that in mind, our members have a  
3 vested interest in protecting our traditional lands  
4 with a view to continuing to exercise our Metis  
5 aboriginal rights in this area for generations to come.  
6 Our Metis aboriginal rights are constitutionally  
7 recognized and affirmed in accordance with two landmark  
8 Supreme Court of Canada cases Powley (phonetic) and  
9 Cunningham (phonetic).

10                  Fortune's proposed Nico mine would  
11 operate right in the middle of the North Slave region  
12 which forms a part of the North Slave Metis peoples'  
13 homeland.

14                  Since before the beginning of the fur  
15 trade, members of our ethnic community have relied on  
16 the land, and hunting and trapping, to survive. As  
17 early as the 1800s our forefathers and sisters supplied  
18 the fur trade industry and the forts with meat and  
19 other products.

20                  When the fur trade industry shifted, so  
21 did our ancestors, relying more and more heavily on the  
22 land to keep our people alive. Today our members still  
23 hunt and trap and exercise their Metis rights all over  
24 their traditional territory north of Great Slave Lake.

25                  The Nico project will have enormous

1 adverse impacts on our members' aboriginal rights. As  
2 just one (1) example, there are tremendous risks to  
3 caribou from this project. There are cumulative risks  
4 including the impact of an all-season road. All-season  
5 access is going to impact caribou numbers and could  
6 have serious long-term consequences on our traditional  
7 harvesting of the Bathurst herd, for example.

8           In addition, our members may experience  
9 a much longer restricted aboriginal harvest than the  
10 one that we are currently experiencing here in -- on  
11 our traditional lands. Despite this, we find ourselves  
12 missing information we need to assess the impact of the  
13 Nico project on our members' rights.

14           For caribou we find Fortune's assessment  
15 is missing information on the importance of ecological  
16 thresholds. There are no temporal references and it's  
17 not related to an agreed sustainable baseline  
18 population.

19           For water quality, a huge number of  
20 water bodies shall be affected and our members don't  
21 have enough information to properly assess the  
22 cumulative effects.

23           We are heartened to see that the British  
24 Columbia Court of Appeal in the West Moberley case  
25 agrees that assessing cumulative effects impacting the

1 entire area of concern is extremely important in the  
2 consultation process.

3                   Further, our members' concerns and their  
4 aboriginal rights are being treated differently than  
5 those of other aboriginal groups, and we are very  
6 dismayed by this situation. Our aboriginal rights-  
7 bearing members must be dealt with on par with other  
8 aboriginal groups such as the Tlicho, but that is not  
9 happening.

10                   The North Slave Metis Alliance posted  
11 two (2) letters to the Board's registry that confirm  
12 this for you. In the first letter I ask Fortune to  
13 improve it's relationship with the North Slave Metis  
14 Alliance. I suggested one (1) way to move forward in  
15 good faith is to establish a cooperative relationship  
16 agreement. This was done for the Tlicho, and again we  
17 say we must be treated on par with our Tlicho  
18 counterparts. However, the second letter reveals that  
19 Fortune plans to deal with us later, after they finish  
20 talking with the Tlicho. Yet, here they are today  
21 asking the Board for statutory approval for this  
22 project.

23                   The constitutional obligation to  
24 adequately consult lies upstream of the statutory  
25 approval. The North Slave Metis Alliance has a case in

1 front of the Northwest Territories Territorial Court on  
2 this point. But the Board has an independent  
3 obligation to assess the consultation to date, as per  
4 the Supreme Court of Canada's 2010 decision in Rio  
5 Tinto.

6 I can provide the full citation of it if  
7 it is needed. It can make just of -- just as valid a  
8 decision as the court regarding the adequacy of  
9 consultation in this situation.

10 This Board is mandated to act in a  
11 quasi-judicial fashion and take into consideration the  
12 evidence put before it, just like a court would. And  
13 we are asking this Board to exercise this authority in  
14 a just and fair manner when it applies this decision  
15 making to the North Slave Metis people.

16 The registry is being kept open to mid-  
17 September, to not only receive the North Slave Metis  
18 Alliance's traditional knowledge report but that too of  
19 the Tlicho. And we are encouraged to hear today the  
20 words of the Tlicho delegation to the effect that they  
21 have just as much concerns as we do. And they're  
22 looking for more time to do the traditional knowledge  
23 study to ensure they get to the full heart of this  
24 mine's proposal.

25 We support that and we encourage that



1 and we respect that. The studies that we are going to  
2 put forward will help this Board in its obligation to -  
3 - to assess the consultation to date with its full  
4 mandate to make quasi-judicial decisions about what's  
5 going to go on in the heartland, in the homeland of the  
6 Tlicho, the Metis, and the Yellowknives.

7 As I said before, the North Slave Metis  
8 Alliance is ready and willing to consult about these  
9 and other adverse impacts on our members' rights. But,  
10 to date, there simply hasn't been adequate consultation  
11 with the NSMA about this project.

12 Information is missing, information  
13 critical to our people's interest in making sure that  
14 this land stays preserved for generations to come.  
15 This is not the time to push forward a project that has  
16 as many gaps as this one does.

17 Required predictions have not been made  
18 and considered. Cumulative effects are not adequately  
19 assessed. For these reasons the North Slave Metis  
20 Alliance is forced to say that we recommend that the  
21 Nico Project go to an environmental impact review so  
22 that our rights-bearing members, and also our First  
23 Nation counterparts, will have the information they  
24 need to form an informed opinion on the mine and how to  
25 manage the adverse impacts on their aboriginal rights

1 for generations and generations to come.

2 This is not a little mine. This is a  
3 mine with a predicted life of nineteen (19) years. Who  
4 knows, it could be even longer than that. The legacy  
5 that we would like to leave behind is a legacy we can  
6 be proud of, one (1) that says that from here on in our  
7 lands are to be respected.

8 There are prime examples of just how bad  
9 things can get. Right here in Yellowknife, with the  
10 Giant Mine remediation plan, we have tonnes of arsenic  
11 trioxide that is supposed to be here in perpetuity.

12 So we have experience already with these  
13 kinds of environmental catastrophes. We want and we  
14 need more information. So in closing, I urge this  
15 Board to put this mine into a full environmental review  
16 so that we have the answers we need to -- to ensure  
17 that our rights and our interests are respected and  
18 protected. Thank you.

19 THE CHAIRPERSON: Thank you. Mr. Bill  
20 Enge, North Slave Metis Alliance. And we'll go to  
21 Fisheries and Oceans Canada.

22

23 OPENING STATEMENT BY FISHERIES AND OCEANS:

24 MS. BEV ROSS: Good morning, Mr. Chair.  
25 My name is Bev Ross. I'm the regional manager for

1 environmental assessment for Fisheries and Oceans  
2 Canada. With me today is Sarah Olivier, an EA analyst  
3 for Fisheries and Oceans Canada, and Rick Walbourne, a  
4 fish habitat biologist for Fisheries and Oceans Canada.

5 DFO is responsible for developing and  
6 implementing policies and programs in support of  
7 Canada's scientific, ecological, social, and economic  
8 interests in oceans and freshwater.

9 The key focus of DFO's review for this  
10 project was with respect to the grid ponds, water  
11 withdrawal and the associated water intake and  
12 diffuser, and water crossings, specifically the Marian  
13 bridge.

14 We'll get into our assessment of these  
15 aspects later this afternoon, but, in conclusion, DFO  
16 has concluded that, provided the Proponent follows the  
17 recommended guidelines and operational statements, and  
18 carries out the project in accordance with the  
19 commitments made, the potential impacts to fish and  
20 fish habitat will be fully mitigated, and  
21 authorizations under the Fisheries Act will not be  
22 required. Thank you.

23 THE CHAIRPERSON: Thank you, Bev Ross.  
24 I'm going to the Government of the Northwest  
25 Territories.

1 (BRIEF PAUSE)

2

3 THE CHAIRPERSON: Okay, then. I don't  
4 see anybody here from the GNWT. I'm going to continue  
5 on to the Aboriginal Affairs and Northern Development  
6 Canada, AANDC.

7

8 OPENING STATEMENT BY AANDC:

9 MR. ROBERT JENKINS: Good morning, Mr.  
10 Chair. My name is Robert Jenkins. I am the acting  
11 director of renewable resources and environment, with  
12 Aboriginal Affairs and Northern Development Canada.  
13 Thank you for the opportunity to speak to the Board  
14 today, and to raise concerns identified by the  
15 department in respect to the Nico Project.

16 Fortune Minerals is proposing the  
17 development of a cobalt, gold, copper, and bismuth  
18 mine, located in the Tlicho region of the NWT.  
19 Location of the project is within an area currently  
20 used by the Tlicho people for traditional activities.

21 The department will discuss three (3)  
22 areas today in its technical presentation. The first  
23 area would be site-specific water quality objectives.  
24 Second, aquatic effects monitoring. And the third will  
25 be closure and reclamation.

1 In general, the department will provide  
2 recommendations regarding site-specific water quality  
3 objectives to help minimize the potential effects to  
4 water quality and provide a higher level of confidence  
5 that the downstream aquatic ecosystem is protected.

6 Regarding aquatic effects monitoring,  
7 our recommendations will ensure a systematic approach  
8 is followed in the development and implementation of a  
9 project-based aquatic monitoring program. Furthermore,  
10 the monitoring will be designed to tie in the results  
11 into a response management framework or, in other  
12 words, adaptive management.

13 Finally, AANDC will put forward  
14 recommendations regarding closure and reclamation, and  
15 the overall closure time frame. These recommendations  
16 support the goal of minimizing impacts to traditional  
17 use of the area, and the length of the post-closure  
18 period.

19 The department requests that all of its  
20 recommendations be placed as measures within the report  
21 of the environmental assessment. We will review and  
22 modify any of our recommendations, if necessary,  
23 following the release of the Tlicho traditional  
24 knowledge study, and include these changes as part of  
25 our final written submissions.

1                   Again, I thank the Board for providing  
2 an opportunity to participate in this process and  
3 present our recommendations. I look forward to a  
4 productive hearing.

5                   THE CHAIRPERSON: Thank you, Robert  
6 Jenkins, with AANDC. Next one I have is Environment  
7 Canada, for your three (3) to five (5) minute  
8 statement.

9

10 OPENING STATEMENT BY ENVIRONMENT CANADA:

11                   MR. CAREY OGILVIE: Thank you, Mr.  
12 Chairman. My name is Carey Ogilvie with Environment  
13 Canada. I'm the head of Environmental Assessment  
14 North, which covers the Northwest Territories and  
15 Nunavut.

16                   I'll be presenting some slides later  
17 today on water quality. With me is Sarah-Lacey  
18 McMillan. She's our Environmental Assessment  
19 Coordinator and lead on this project, so she's here to  
20 help me answer any questions.

21                   Not here today is Dr. James Hodson, he's  
22 the Canadian Wildlife Service Coordinator. He'll be  
23 joining you in Behchoko. I believe as many of you  
24 know, Environment Canada is participating in the review  
25 of the proposed Nico project in order to provide

1 specialist expertise to the Board.

2 Environment Canada will not be issuing  
3 any permits or authorizations, but as regulatory duties  
4 and responsibilities. The relevant legislation  
5 administered by Environment Canada, which includes the  
6 content of our submission includes Department of  
7 Environment Act; Canadian Environmental Protection Act  
8 1999; and the Fisheries Act: Pollution, Prevention,  
9 Provisions; Migratory Birds Convention Act; and the  
10 Species at Risk Act.

11 Environment Canada's presentation  
12 focusses on issues that fall within our mandated  
13 responsibilities for water quality, mig -- migratory  
14 birds and species at risk. So today we'll be  
15 presenting comments and recommendations on the proposed  
16 site-specific water quality objectives, and then  
17 Behchoko is on boreal woodland caribou, the disturbance  
18 and destruction of nest and eggs of migratory birds,  
19 and the proposed communications tower. Thank you.

20 THE CHAIRPERSON: Thank you, Mr.  
21 Ogilvie, Environment Canada.

22 Transport Canada...?

23

24 OPENING STATEMENT BY TRANSPORT CANADA:

25 MR. DALE KIRKLAND: Good morning, Mr.

1 Chairman, Elders, ladies, and, gentlemen, my name is  
2 Dale Kirkland, and I'm the Regional Manager of  
3 Environmental Affairs and Transport Canada Prairie and  
4 Northern Region.

5 With me here today is Mr. Doug Soloway  
6 who is the Superintendent of Environmental North in  
7 Transport Canada as well, Prairie and Northern Region.  
8 We would like to thank the panel for providing  
9 Transport Canada with the opportunity to speak to the  
10 proceedings today.

11 Transport Canada is a responsible  
12 minister for the environmental assessment of the Nico  
13 project, because Transport Canada may give approvals  
14 for project works that will be build in navigable  
15 waterways. Works built in navigable waterways are  
16 subject to the Navigable Waters Protection Act.  
17 Transport Canada regulates these works to make sure  
18 that the public's right to safe navigation is  
19 protected.

20 The Nico Project will involve a bridge  
21 crossing across the Marian River, a water intake in Lou  
22 Lake, and a water diffuser in Peanut Lake. When  
23 approving works like bridges, water intakes, and water  
24 diffusers under the NWPA, or Navigable Waters  
25 Protection Act, Transport Canada makes sure that the



1 public's right to navigate is protected and the works  
2 are designed and are built in a way that prevents  
3 safety havard -- hazards to navigators.

4 Fortune has not yet submitted final  
5 design plans for proposed works in navigable waterways  
6 and has not yet applied for approval of works under the  
7 NWPA. However, based upon the information provided to  
8 date, Transport Canada does not foresee significant  
9 impacts to navigation or navigational safety as a  
10 result of the Nico project.

11 Fortune has committed to providing  
12 Transport Canada with updated information as it becomes  
13 available and has shown a willingness to cooperate with  
14 Transport Canada's requirements to protect the right to  
15 navigate.

16 In conclusion, Transport Canada looks  
17 forward to continued dialogue and cooperation with the  
18 Board, other fer -- federal and territorial government  
19 agencies, stakeholders, and the Proponent. I'd like to  
20 thank the panel for the opportunity to make this  
21 presentation today.

22 THE CHAIRPERSON: Thank you, Mr.  
23 Kirkland. I'm going to go to Natural Resources Canada.

24

25 (BRIEF PAUSE)

1 OPENING STATEMENT BY NATURAL RESOURCES CANADA:

2 MR. JOHN KING: Good morning,  
3 Chairperson, and, Board members. My name is John King.  
4 I'm an environmental assessment coordinator with the  
5 Environmental Assessment Division at Natural Resources  
6 Canada, known as NRCan for short. I'm the NRCan  
7 spokesperson for this project.

8 My opening comments will highlight  
9 NRCan's role in the review of the proposed Nico mine.  
10 NRCan's mandate is to develop and deliver policies,  
11 programs, science, and technology for sustainable  
12 development and responsible use of Canada's natural  
13 resources, energy, and forestry resources. NRCan  
14 conducts a broad range of scientific and technological  
15 research, including geoscience.

16 NRCan's team here at the public hearing  
17 also includes Rob Johnstone, who is behind me, and Rob  
18 is the Deputy Director of our Sustainable Mining and  
19 Materials Policy Division.

20 Due to the timing of the hearings,  
21 technical experts who undertook the review are not able  
22 to attend at the public hearings. NRCan has  
23 hydrologist Dr. Christine Rivard available on the phone  
24 for today, and Dr. Sharon Smith, our permafrost expert,  
25 available on the phone up until noon on August 30th.

1 If questions arise during our technical review that  
2 we're not able to answer, NRCAN will provide a written  
3 response to the Board.

4 As context for NRCAN's role in the  
5 Board's review of the Nico project, Fortune proposes  
6 explosives manufacturing at the mine site during its  
7 operational phase. NRCAN regulates the manufacture and  
8 storage of explosives through the Federal Explosives  
9 Act.

10 In addition, NRCAN experts have  
11 participated in the technical review regarding deposit  
12 geology, hydrogeology, geotechnical science and  
13 engineering, permafrost, terrain sensitivity, surficial  
14 geology, geohazards, and mine waste management  
15 including metal leaching and acid rock drainage.

16 I would like to highlight  
17 recommendations from our June 2012 technical report  
18 regarding the co-disposal facility and the access road.  
19 For the co-disposal facility, or CDF, NR -- NRCAN  
20 agrees with Fortune that its seepage impacts can be  
21 minimized following appropriate design and an effective  
22 management plan. NRCAN is supportive of Fortune's  
23 approach and commitments for the final design.

24 As the CDF design is at a preliminary  
25 stage, NRCAN made recommendations for refining

1 stability analysis and further geotechnical  
2 investigations to support its detailed and final  
3 design.

4                   For the access road, NRCan agrees that  
5 impacts of the access road on the terrain and on the  
6 environment -- and the environment can be minimized  
7 with appropriate design and mitigation techniques.  
8 NRCan recommended guidance for Fortune to consider as  
9 its design -- as its design progresses. These relate  
10 to further detailed terrain analysis, geotechnical  
11 investigations, thermal analysis, potential ground  
12 settlement, and consideration of longer-term effects  
13 associated with vegetation removal and changes in  
14 permafrost and drainage conditions.

15                   For terrain-related monitoring and  
16 mitigation management plans, NRCan has recommended the  
17 installation of instrumentation to monitor changes to  
18 the ground's thermal regime and ground movements.  
19 NRCan will describe these in more detail in our  
20 presentations during the water quality and access road  
21 sessions.

22                   In -- in closing, NRCan appreciates the  
23 opportunity to contribute to this review. Masi.

24                   THE CHAIRPERSON: Thank you, Mr. King.  
25 Thank you. Those are the opening statements by

1 parties. We've allowed three (3) to five (5) minutes.

2 That was really good. I want to thank you for all

3 that.

4 We're going to take a ten (10) minute

5 break, and we're going to come back at approximately

6 twenty (20) after 10:00. We'll stop here, and we'll

7 continue on. Thank you.

8

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

10 --- Upon resuming at 10:33 a.m.

11

12 THE CHAIRPERSON: Okay, good morning.

13 We'll like to continue on. This morning, we -- we did

14 the opening remarks by the Chair, but after lunch today

15 I was going to go back and reclarify my comments

16 because I was missing a couple of pages. So I'll do

17 that after lunch.

18 Also, from this morning, I'm trying to

19 keep the schedule we have and I -- we were slightly

20 behind this morning, because of mi -- again, minor

21 technical issues that then delayed us by fifteen (15)

22 minutes. And also this happened in -- in a community

23 the other day, in Whati, when we did our presentation.

24 However, the -- the Board stayed behind,

25 stayed an additional three (3) hours to accommodate the

1 -- the residents of Whati to listen to as much people  
2 as we can, and we did that. So here today, I want to  
3 continue on with the agenda that's before us, and we'll  
4 try to stick to the time limits we have.

5 Again, I'd like to just remind everybody  
6 to either shut off your cell phone and to -- or put it  
7 on the silent mode, or vibrate, or whatever. And we'll  
8 -- that will be just so it doesn't interrupt our  
9 presenters.

10 Again, the Board is here to listen, and  
11 we're getting to the technical part of the Nico Project  
12 EA now. So I'm going to go to the next part of the  
13 agenda, is the presentation by Fortune Minerals on  
14 water quality and operation and closure.

15 We're going to go till noon. And then  
16 at noon, we're going to stop until -- and come back at  
17 1:00. So I'd like to be on schedule. So, anyway, I'm  
18 going to turn it over to Fortune Minerals. And if we  
19 could just dim the lights so we could watch that. And  
20 if the lights come back and if I'm sleeping, just maybe  
21 throw something at me. Thank you. We'll continue on.

22

23 WATER QUALITY, OPERATIONS, AND CLOSURE PRESENTATION BY  
24 FORTUNE MINERALS:

25 MR. JOHN FAITHFUL: Thank you, Mr.

1 Chair. My name is John Faithful. I'm with Golder  
2 Associates. First, we prepared a slide presentation  
3 that grounds the scientific information and assessment  
4 of the proposed Nico Project's predicted effects to  
5 water quality on the receiving environment, and there  
6 are four (4) operations and closure phases of the  
7 project.

8 The presentation was filed for this  
9 technical hearing. It was more detailed than the pre -  
10 - presentation that we made at the community hearing in  
11 Whati on Monday, August the 27th. We've been asked by  
12 the Board to shorten this presentation at this  
13 technical hearing today. We have chosen to provide the  
14 Board with a reiteration of the conclusions of the  
15 presen -- presentation that we have made.

16 We encourage the Board to read the  
17 presentation that has been posted in its entirety,  
18 given that this is such a key issue, specifically to --  
19 to the interested parties here today.

20 The conclusions of the water quality  
21 assessment are based on the conclusions that have been  
22 presented in the Developer's Assessment Report, the  
23 information that has been provided in the Information  
24 Request responses, the technical sessions undertakings,  
25 and any updated assessment findings that have arisen

1 since the submission of the Develop -- Developer's  
2 Assessment Reports with respect to changes to the mine  
3 plan.

4 An example of this is the -- the water  
5 management associated with the treatment technology  
6 moving from ion exchange systems to an RO system.

7 Two (2) specific pathways during the  
8 operations phase were identified as leading to  
9 potential effects to water quality, one (1) being air  
10 emissions from the project site and the second one (1)  
11 being effluent discharge from the mine site to  
12 receiving waters.

13 The proposed mine site is a -- is a mine  
14 site, is expected to generate air emissions and dust  
15 emissions. These are associated with power generation,  
16 vehicle transport, vehicle emissions, blasting.

17 The air quality assessment found that  
18 the generation of emissions and the deposition of those  
19 emissions would be localized to a site -- to an area  
20 that was delimited by the project boundary. That  
21 information was taken from a water quality perspective.

22 The effects that were determined to  
23 result from the -- the deposition of those emissions  
24 was also found to be limited to a localized extent,  
25 also limited for the duration of the project. Very



1 conservative assumptions were associated with that  
2 assessment. However, the conclusions showed that there  
3 was a low risk expected to aquatic life within the  
4 receiving environments around the project site.  
5 There's also very little potential for the lakes to  
6 become acidified in that localized environment.

7 Fortune is committed to ongoing  
8 mitigation and monitoring of air emissions associated  
9 with the emissions from the site and -- and dust  
10 generation. Mitigation, such as ongoing dust ma --  
11 dust watering to manage emissions during the open-water  
12 period is one (1) of those examples.

13 The second pathway during operations is  
14 treated effluent and discharge from the seepage  
15 collection ponds. Discharge from the seepage  
16 collection ponds is expected to be very minimal during  
17 operations, as the water that collects in the toe of  
18 the co-disposal facility will be pumped back to the  
19 surge pond and discharged through -- after treatment  
20 through the effluent treatment facility.

21 Effluent from the effluent treatment  
22 facility will drain into Peanut Lake, where it is  
23 expected that water will meet site-specific water  
24 quality objectives at the outlet of Peanut Lake. Site-  
25 specific water quality objectives are also expected in

1 Nico Lake for the duration of operations. Any seepage  
2 from the collection ponds is expected to be very small.

3                   As we understand from the baseline  
4 conditions in the Burke Lake watershed, the  
5 concentration of water chemistry constituents will  
6 decrease as you move through the Burke Lake watershed  
7 to the Marian River. The concentration -- or, the --  
8 or the changes in the Marian River water quality are  
9 small and will be within the baseline range of  
10 concentrations that is currently existing in baseline  
11 conditions.

12

13                   (BRIEF PAUSE)

14

15                   MR. JOHN FAITHFUL: For the course of  
16 operations, adverse effects from the deposition of air  
17 emissions to the receiving environment are not  
18 expected. Air emissions will be localized and of -- of  
19 duration only for the course of operations.

20                   Changes in water quality in the Burke  
21 Lake watershed and down into Marian River will be  
22 small, small enough to -- and expected to result in  
23 negligible adverse effects to aquatic life, aquatic  
24 health, wildlife health, and human health.

25                   Based on our assessment for the period

1 of operations, the opportunity for people to use the  
2 resources in Hislop Lake area and downstream in the  
3 Marian River will continue as they have in the past.  
4 This conclusion is based on widely used and accepted  
5 scientific methods to assess the impact of these  
6 resources. People can continue to drink the water and  
7 eat the fish in the Hislop area -- Hislop Lake area and  
8 the Marian River and downstream in the Marian River as  
9 they have done.

10 For the closure operation, one (1)  
11 specific pathway was assessed, that being the site  
12 discharge to the receiving environment. Fortune was  
13 requested to consider the active filling of the open  
14 pit as part of its closure scenario. This would  
15 require that water from the Marian River would be used  
16 to supplement the inflow of the open pit.

17 This is expected to take approximately  
18 eight (8) to fourteen (14) years, and it will be  
19 contingent on guidelines that are provided by DFO with  
20 respect to water extraction from the river to make sure  
21 that downstream flows are not -- not affected, so as to  
22 sustain fish and fish habitat.

23 While the pit is being filled, there  
24 will be a source of discharge from the seepage  
25 collection ponds around the co-disposal facility. Much

1 of this will occur during the spring freshette. Once  
2 the pit overflows, there'll be a source of overflow  
3 water through to Peanut Lake. Again, during the  
4 freshette period, that will be the peak period of  
5 inflows.

6 Our assessment shows that flows from  
7 these sources to Nico and Peanut Lake may result in  
8 some chemical concentrations that may be higher than  
9 the site-specific water quality objectives that we have  
10 assigned to those particular lakes. We recognize that  
11 this is a conservative assessment; however, the  
12 predictions that we have made are still within the  
13 range of baseline concentrations for these parameters  
14 within the Burke Lake watershed.

15 A risk assessment has been undertaken  
16 for the receiving water quality as a result of these  
17 inflows and determined that there is a low risk of  
18 effects to aquatic life. This is without the -- the  
19 use of wetlands to provide an additional layer of pro -  
20 - protection to both Nico and Peanut Lake during the  
21 closure period.

22 Again, as we identified during the  
23 baseline surveys, there will be a concentration change,  
24 a reduction in chemis -- in the water quality  
25 constituents as you -- as you move down from Nico

1 through the Burke Lake into the Marian River.

2

3 (BRIEF PAUSE)

4

5 MR. JOHN FAITHFUL: During closure and  
6 post-closure, our assessment shows that flows from the  
7 seepage collection pond and also the open pit through  
8 to the Burke Lake watershed, without a wetlands system,  
9 will have a negligible adverse effect on aquatic  
10 health, wildlife health, and human health in these  
11 lakes, also through to the Marian River.

12 With the wetlands systems that will be  
13 constructed, there will be an added level of protection  
14 to any potential effects to water quality through their  
15 capacity to treat the flows and assimilate some of the  
16 chemistry in those flows.

17 For closure and post-closure, based on  
18 our assessment of the potential effects to water  
19 quality, opportunities to continue to use the resources  
20 in the Hislop Lake area and downstream of the Marian  
21 River will continue as they have done in the past.

22 I want to emphasize, Mr. Chair, that no  
23 adverse impacts are predicted on the resources  
24 themselves, that being water quality and fish and fish  
25 habitat. Our conclusions are based on a solid

1 understanding of the project and the use of widely  
2 accepted scientific methods to determine the potential  
3 impacts upon the receiving environment.

4                   Again, I reiterate that people will be  
5 able to continue to use the Marian River system as they  
6 have in the past; to drink the water, to eat the fish  
7 in the Hislop Lake area and in the Marian River. Thank  
8 you.

9                   THE CHAIRPERSON: Thank you for your  
10 presentation made by Fortune Minerals this morning.  
11 I've got a list of order, in terms of questions for  
12 Fortune Minerals.

13                   MR. RICK SCHRYER: Mr. -- Mr. Chairman,  
14 just one (1) moment please.

15                   THE CHAIRPERSON: Thank you.

16                   MR. RICK SCHRYER: That wasn't the end  
17 of our presentation. We still have -- as I mentioned  
18 in my opening statement, we still have one (1) on the  
19 wetland treatment system --

20                   THE CHAIRPERSON: Okay.

21                   MR. RICK SCHRYER: -- as a follow-up to  
22 what John just said. I think people need the -- this  
23 information in order to properly understand how these  
24 constructed wetlands would work.

25                   THE CHAIRPERSON: Please proceed.

1 DR. MONIQUE HAAKENSEN: Hello. My name  
2 is Dr. Monique Haakensen. I'm with Contango  
3 Strategies, and I also have here with me Glen Koblun  
4 from Ducks Unlimited Canada, who is a member of our  
5 team working on constructed wetlands.

6 I would like to thank you for having me  
7 here to present some information about our methods and  
8 ex -- experience in developing and implementing  
9 constructed wetlands, and how this might -- sorry --  
10 and how this can be implemented at the Nico site for  
11 post-closure water treatment.

12 Our team brings together three (3)  
13 groups of expertise and there's no other group like  
14 this building constructed wetlands. My company,  
15 Contango Strategies, conducts scientific research and  
16 development for the purpose of helping resource  
17 companies reduce their environmental impact in long-  
18 term and sustainable ways.

19 We operate laboratories as well as  
20 indoor and outdoor pilot constructed wetland facilities  
21 in Saskatoon. Dr. John Rodgers and Dr. James Castle  
22 are university professors who bring with them over  
23 thirty (30) years of experience in designing and  
24 implementing constructed wetlands for the most  
25 difficult to treat waters, such as oil and gas produce

1 waters, mine effluent, and waters coming off coal power  
2 plants.

3                   And Ducks Unlimited Canada, who is well  
4 known for their conservation efforts; Native Plant  
5 Solutions, who is our remediation services division,  
6 joins us on these projects and provides over seventy-  
7 five (75) years of experience and knowledge and  
8 expertise in ecosystems and wetland habitats, including  
9 in the Northwest Territories.

10                   Our experience in designing and -- and  
11 implementing constructed wetlands is very wide-ranging;  
12 it spans over thirty (30) years. This is not  
13 experimental technology. We have implemented and  
14 proven this technology in many other instances. We  
15 have even build constructed wetlands in Alaska. Over a  
16 decade ago Dr. John Rodgers designed and built a  
17 constructed wetland for the US military to clean  
18 military wastes for water that was running into a river  
19 and estuarine area. This area now supports many fish  
20 and wildlife species.

21                   We have treated a wide range of metals  
22 and other contaminants of concern. We have treated  
23 things such as arsenic, which we will be treating here  
24 at the Nico site.

25                   We operate indoor and outdoor pilot



1 facilities that allows us to test these wetlands and  
2 give us confidence in our predictions.

3                   So what is a constructed wetland  
4 treatment system? A contru -- a constructed wetland  
5 treatment system, or CWTS, is built on scientific  
6 principles of wetlands that naturally clean water. All  
7 around the world, wetlands can function to clean water.  
8 These wetlands might look different in different places  
9 around the world. There are different types of plants,  
10 different types of soil. But the same types of  
11 contaminants occur in all places around the world and  
12 there are wetlands that can clean these things.

13                   Different fact -- wetlands function in  
14 different ways. And even within a single wetland you  
15 will find different areas that can clean different  
16 contaminants with different abilities. We use our  
17 experience and knowledge in studying these wetlands to  
18 know which types and areas of a wetland will remove the  
19 contaminant that is of concern to a particular water.  
20 The constructed wetlands that we will build at the Nico  
21 site will be site specific and based on these  
22 considerations.

23                   So how does the wetland actually clean  
24 the water? All wetlands are made of three (3) things:  
25 water, plants, and soil. But we have flexibility in

1 how we can use these three things. Even though we only  
2 use natural plants that are native to the area, there  
3 are a wide variety of plants to choose from in the  
4 area. We visited the Nico site yesterday and saw many  
5 plants that we are comfortable of working with and that  
6 are -- we have used in our previous wetland designs to  
7 treat water in other places.

8                   We can adjust the type of plant we use,  
9 the type of soil that we use, as well as the depth of  
10 the water and the flow rate of the water to accomplish  
11 and achieve the right environment for the reactions to  
12 occur to clean the water.

13                   Key to our design of these wetlands is  
14 that we do not -- we do not allow the plants to  
15 accumulate the contaminants. Instead, the contaminants  
16 are placed into the soil in a natural form. This is a  
17 long-term and safe place for these minerals and metals  
18 to be put.

19                   Wetlands around the world can function  
20 to clean water. Now, of course, there are special  
21 considerations for designing a wetland in cold climate.  
22 Wetlands obviously function differently when they are  
23 frozen than when they're free flowing. So when we  
24 design a wetland for a cold climate, we take into  
25 account that the total volume of water -- all of the

1 snow and all of the year's rainfall -- must be treated  
2 with the months that the water's free flowing.

3                   We also put in special design  
4 considerations to accommodate the spring thaw. We are  
5 able to test these designs by using our outdoor pallet  
6 facilities in Saskatoon. And I realize Saskatoon is  
7 not the Northwest Territories, but it does get cold  
8 there. We get temperatures below minus forty (40) in  
9 the winter. In our coldest months our average lows are  
10 below minus twenty (20) and we rarely get temperatures  
11 above minus ten (10) in those months. That allows us  
12 an opportunity to model the freeze/thaw cycles that  
13 occur in cold climates.

14                   There are also many examples of wetlands  
15 functioning in northern climates. There is the wetland  
16 in Alaska that I've referred to that our group built.  
17 There are also wetlands in Northern Saskatchewan that  
18 clean uranium mining waste, and this is up near the  
19 Saskatchewan/Northwest Territories border. There are  
20 also wetlands in Alaska that clean metals from other  
21 mines. I also present some examples of wastewater  
22 wetlands that are currently being used in communities  
23 around the Northwest Territories.

24                   And I realize there are differences  
25 between the treatment of human wastewater and mine

1 effluent. However, I've presented an -- as an example  
2 that wetlands can function for many things all around  
3 the world, as wetlands are used around the entire globe  
4 to treat wastewater, just as they are used here in the  
5 Northwest Territories.

6 Our approach to building constructed  
7 wetlands is custom and site specific. This is not  
8 experimental. It is based on our years of knowledge  
9 and experience in building these in many places for  
10 many different types of water.

11 It is a custom design because we realize  
12 that each site, no matter where it is, whether it -- it  
13 is this Nico site or other sites that we have worked  
14 with, every site has special considerations that  
15 require a custom design in order for the wetland to  
16 work properly, predictably, and safely.

17 We build our wetlands using cells. Each  
18 cell is specifically designed to remove a different  
19 contaminant of concern. These cells are arranged to  
20 remo -- to clean the water in the safest and most  
21 effective way possible. We design these so that the --  
22 the contaminants are safely placed into the soil and  
23 are sequestered there long-term and sustainably.

24 The key concepts to our design of  
25 constructed wetlands -- the water, and when we clean

1 the water, to do so in a way that is safe for the  
2 environment in a long-term and sustainable way.

3 Nature has ways of -- of naturally  
4 cleaning water. And we can already see this happening  
5 in the grid pond system at the Nico site. We learn  
6 from these types of systems and use our knowledge from  
7 these systems in our design of the constructed wetland.

8 The performance of our systems must be  
9 scientifically tested. The reason why we spend so much  
10 time on pilot skill testing is because we must have  
11 enough information to predict long-term performance of  
12 these systems. We test the water, the sediments, the  
13 plants. And we also test -- test the effects that the  
14 outflows have on aquatic life.

15 So how can we be confident in their  
16 performance? Well, first, it's our experience. We  
17 have built many of these before. As I've mentioned  
18 before, we've even built these in cold climates. Each  
19 case is specific, no matter where it is.

20 For the specific site, at the Nico site,  
21 the me -- the -- the wetland is tested through a  
22 rigorous scientific testing and design. We use  
23 modelling. We use indoor and outdoor pallet wetlands.  
24 And we used a phased approach to ensure that at each  
25 step we have a chance to learn from our findings and

1 make the wetland better.

2                   When we perform our indoor wetlands, the  
3 wetland functions as it would during the summer. And  
4 we can do this year-round to allow us to test many more  
5 parameters. For example, on the indoor wetlands, we  
6 can test extreme situations such as a drought, or an  
7 extreme rainfall event, or an increased temperature in  
8 the summer.

9                   By understanding how the wetlands work  
10 during these extreme situations, we can build in extra  
11 safety precautions into the design and size of the  
12 wetland. This gives our wetlands contingency. They  
13 are much more robust and capable of much more than they  
14 would ever be required to do on a day-to-day basis.

15                   As I've mentioned before, we build our  
16 wetlands using phases. We start with an assessment and  
17 feasibility, where we gather data and information. We  
18 have already reviewed the water quality information for  
19 the Nico site seepage qual -- seepage water from the  
20 CDF and believe -- are confident that, based on our  
21 experience and knowledge of this water, that we can  
22 treat the water to meet the SSWQOs for the site.

23                   We take this information to design the  
24 indoor constructed wetlands. We test these, as I've  
25 mentioned, through many rigorous tests and extreme

1 environmental situations. But we also test baseline  
2 conditions and we test different designs to see which  
3 one (1) would work best for the specific type of water.

4               We take what we have learned from these  
5 indoor pilot wetlands and use the best designs to build  
6 the outdoor wetlands. Again, we use several optimized  
7 designs for the outdoor wetlands, so we can choose  
8 which one (1) is working best and learn from the  
9 differences. These outdoor pallet wetlands are allowed  
10 to perform for over two (2) years, so we can test  
11 freeze/thaw cycles.

12              This is where our first set of work  
13 would come to an end for this project. We take this  
14 time at that point to consider all the information that  
15 we have gained, to look at site specific -- more site-  
16 specific requirements that would be needed for a  
17 demonstration-scale wetland.

18              We take this information in order to  
19 design the demonstration-scale wetland. And the  
20 demonstration-scale wetland is built on site so that we  
21 can prove that the design works -- thank you -- so that  
22 we can prove the design works on site with the water  
23 that is there. We would then proceed to a full-scale  
24 wetland after the demonstration-scale wetland has been  
25 functioning for some time.

1                   Here's some pictures of the scaled  
2 approach that we take. The pilot scale is built in  
3 cells, the demonstration scale is built on site, and  
4 the full-scale wetlands are built to a size and  
5 configuration that is required for the amount of water,  
6 the concentration of the contaminants of concern, and  
7 the site-specific requirements.

8                   The top wetland here is treating water  
9 that is coming off of a uranium facility, a upgrading  
10 site. Thank you. And that site there is currently  
11 operating on a yearly, only once a year, monitoring  
12 schedule. The wetland below that, right here,  
13 functions to clean selenium and mercury from a coal  
14 power plant. Both of these wetlands release their  
15 water, which meets the water quality objectives, into  
16 the receiving water body, from which people fish and  
17 eat those fish.

18                  Our study plan here is to evaluate the  
19 pathways to remove each constituent from the water, to  
20 design a wetland that will remove each of these  
21 contaminants in the safest way possible. We will  
22 design an indoor pallet wetland; and I've talked about  
23 the different parameters we'll test there. And then  
24 based on that preliminary information, we will build  
25 the outdoors wetland. We have seen the site and are



1 comfortable with the location and plants that are there  
2 that we can work with.

3                   Here are some pictures of our pilot-  
4 scale wetlands. The two (2) on the left are -- are  
5 outdoor wetlands -- or, outl -- outdoor pilot-scale  
6 wetlands. These pictures were taken in summer, but  
7 during the winter they will be frozen solid and covered  
8 in snow. This here is our indoor greenhouse.

9                   Our goals for this project are to  
10 determine how quickly and effectively we can remove the  
11 contaminants from the water. We will gather the  
12 information and the data needed to design a  
13 demonstration-scale constructed wetland that will be  
14 implemented on site.

15                   Our overriding goal that we keep in mind  
16 through all of the design and demonstrations here is  
17 that this must become a walkaway system for water  
18 treatment at the Nico site. And I'd like to say that,  
19 in this context, when I say "walkaway," I mean  
20 something that will require no active management for  
21 long-term. Thank you for your time.

22                   THE CHAIRPERSON: Thank you. We'll go  
23 to Rick Schryer. Was there anybody else that -- from  
24 your group that was going to do a presentation?

25                   MR. RICK SCHRYER: No.

1 THE CHAIRPERSON: No? Okay. Thank  
2 you. Thank you for your presentation.

3 I'm going to go to a format, in terms of  
4 questioning from the parties here, well, based on your  
5 presentation. But before I do that, I just wanted to  
6 recognize a couple people in the audience, and it may  
7 happen throughout the day. But I just wanted to also  
8 just recognize the former Grand Chief from the Tlicho  
9 Region, Joe Rabesca. I believe he's in the back.  
10 Also, the former MLA for Range Lake in the back is  
11 Sandy Lee. I just wanted to recognize her too, as  
12 well.

13 And so we'll continue on. I'm going to  
14 go into -- and just to remind the parties that are  
15 going to be putting forward their questions, that on  
16 the agenda we have until noon. So if we could really  
17 concentrate on your questions and keep them limit --  
18 and so that we could be on time.

19 So I'm going to go to the Tlicho  
20 Government. Is there any questions for Fortune  
21 Minerals on their presentation?

22

23 QUESTION PERIOD:

24 DR. GINGER GIBSON: Masi, Mr. Chair.  
25 Ginger Gibson, for the Tlicho Government. The -- in

1 your presentation on water quality the Developer has  
2 suggested that people will be able to use Marian River  
3 as they have traditionally used it.

4 I'd like to ask the Developer a question  
5 about whether they use the endpoint of Burke Lake as  
6 well and whether they considered that the use of Burke  
7 Lake, which we will demonstrate later in our TK  
8 presentation and our presentation this afternoon on  
9 water quality, has substantial traditional use; whether  
10 changes to Burke Lake, traditional use of Burke Lake,  
11 have been considered as an endpoint. Masi.

12 THE CHAIRPERSON: Thank you, Ginger  
13 Gibson. I'm going to go to Fortune Minerals, Rich  
14 Schryer.

15 MR. JOHN FAITHFUL: John Faithful. Mr.  
16 Chair, we have considered the traditional use of Burke  
17 Lake in our assessment. Site-specific water quality  
18 objectives were set for Peanut Lake to ensure that the  
19 downstream environment does -- does not substantially  
20 change, the results of the project does not add  
21 additional risk to the aquatic health, the wildlife  
22 health, and human health in the Burke Lake system -- in  
23 Burke Lake. Thank you.

24 THE CHAIRPERSON: Thank you, John  
25 Faithful of Fortune Minerals. We'll go back to the

1 Tlicho Government, Ginger Gibson.

2 DR. GINGER GIBSON: Masi, Mr. Chair.

3 And do these sta -- same statements apply to the  
4 closing of the -- the proposed mine for Burke Lake?

5 THE CHAIRPERSON: Thank you, Ginger  
6 Gibson. I'll go back to Fortune Minerals.

7 MR. JOHN FAITHFUL: Mr. Chair, John  
8 Faithful. The answer is yes.

9 THE CHAIRPERSON: Thank you. Tlicho  
10 Government, Ginger Gibson.

11 DR. GINGER GIBSON: Masi, Mr. Chair.  
12 Can you please clarify what traditional foods you  
13 considered in your risk assessment? Masi.

14 THE CHAIRPERSON: Thank you, Ginger  
15 Gibson. Fortune Minerals...?

16

17 (BRIEF PAUSE)

18

19 MR. JOHN FAITHFUL: Mr. Chair, John  
20 Faithful. I have with me Theresa, from Golder  
21 Associates, who is going to support some of the answers  
22 to the questions with respect to water quality, in  
23 particular the risk assessment.

24 THE CHAIRPERSON: Thank you. Please  
25 proceed.

1 MS. THERESA REPASO-SUBANG: Mr. Chair  
2 and Board members, yes, to the answer to that question  
3 is we've evaluated traditional foods, including --  
4 sorry, Theresa Repaso-Subang, Golder Associates. I  
5 apologize.

6 The risk assessment evaluated  
7 traditional foods, including sport fish, osprey, moose,  
8 caribou, wolverine, fox, several mammals and birds, as  
9 well as plants that are being harvested by the -- by  
10 the communities.

11 THE CHAIRPERSON: Thank you. I'm going  
12 to go back to Ginger Gibson from the Tlicho government.

13 DR. GINGER GIBSON: Masi. Later today  
14 we'll be illustrating that Elders in Tlicho region  
15 specifically harvest beav -- beaver and muskrat, as  
16 well as eggs, in -- at Deto Tia, which is Burke Lake in  
17 English. So have those assessment endpoints been  
18 considered? Masi.

19 THE CHAIRPERSON: Thank you, Ginger  
20 Gibson. I'll go back to Fortune Minerals.

21 MS. THERESA REPASO-SUBANG: Golder  
22 Associates, Theresa Repaso-Subang. Yes, they have.

23 THE CHAIRPERSON: Okay. Thank you.  
24 Any further questions from the Tlicho government?  
25 Ginger Gibson...?

1 DR. GINGER GIBSON: The operation  
2 presentation mentions meeting the SSWQOs, the site-  
3 specific water qualities, at the outlet of Peanut Lake.  
4 We've previously asked about this, but I think we'd  
5 like to ask or request clarification of exactly where  
6 the SSWQOs are going to be applied.

7 Is it all of Peanut Lake; some portion  
8 of Peanut Lake for -- and thereby allowing for a mixing  
9 zone consistent with the comments made by AANDC; or  
10 only at the outlet?

11 THE CHAIRPERSON: Thank you, Ginger  
12 Gibson. I'm going to go to Fortune Minerals.

13 MR. JOHN FAITHFUL: Mr. Chair, it's  
14 John Faithful, Golder Associates. In the presentation,  
15 we indicated that the proposed site-specific water  
16 quality objectives would be met at the outlet of Peanut  
17 Lake. The extent of the mixing zone, as per the -- the  
18 requirement to -- to develop an attenuation zone around  
19 any diffuser facility, has been provided in Information  
20 Request Round 2 EC2-4.

21 The extent of the mixing zone did not  
22 change with the revised treatment system as -- as a  
23 response to -- to going to the RO system. The volume  
24 of treated effluent in the RO system is exactly the  
25 same as it was pre -- presented for the original

1 treatment system.

2 Peanut Lake is a small receiving water  
3 body. It has a directional diffuser system in the  
4 region where the discharge to the receiving environment  
5 will be to -- to -- within a deeper zone of the lake.  
6 Because it is of a relatively small volume, the lake is  
7 required to be used as -- as -- in terms of the mixing  
8 zone.

9 We feel that that is -- that is  
10 acceptable enough to continue to maintain the -- the  
11 low risk with respect to aquatic health in the Peanut  
12 Lake system and to ensure that aquatic health -- and to  
13 make -- and to -- to -- to allow for a reduced or a low  
14 risk to aquatic health, wildlife health, and human  
15 health in the Burke Lake receiving environment. So the  
16 attenuation zone is Peanut Lake.

17 THE CHAIRPERSON: Thank you, John  
18 Faithful from Fortune Minerals. Tlicho government,  
19 Ginger Gibson, is there any further questions?

20 DR. GINGER GIBSON: Yes, Mr. Chair.  
21 Thank you. Mr. Chair -- or, can the Developer please  
22 let us know how you plan to revisit the estimations of  
23 significance, particularly on traditional use, after  
24 the use of the Traditional Knowledge and Traditional  
25 Use Study on September 15th? Masi.

1 THE CHAIRPERSON: Thank you, Ginger  
2 Gibson. I'm going to go to Fortune Minerals.

3

4 (BRIEF PAUSE)

5

6 MR. RICK SCHRYER: Rick Schryer,  
7 Fortune Minerals. It's difficult to answer that  
8 question until we actually see the report. We will  
9 obviously be looking at the traditional knowledge  
10 studies submitted by the Tlicho government and we will  
11 consider the endpoints presented in that report as we  
12 move further into this process. But as I said, it's  
13 difficult to answer that question without having  
14 actually seen the report.

15 THE CHAIRPERSON: Okay, thank you. I'm  
16 going to go back to the Tlicho government and Ginger  
17 Gibson. I just want to just remind that I'm not sure  
18 how much more questions you have, but we have nine (9)  
19 more presenters that may want to ask questions, so I  
20 just want to just remind you of that. Ginger  
21 Gibson...?

22 DR. GINGER GIBSON: Masi, Mr. Chair.  
23 Perceived risk is a real issue with -- in particular,  
24 with Kwe Tia, or Rayrock Mine, where Elders have  
25 discontinued use of harvesting and gathering of



1 traditional medicines in the area because of air  
2 emissions and because of perceived changes to drinking  
3 water quality.

4 Has the Developer considered that direct  
5 case study in the estimations of significance made for  
6 this proposed mine? Masi.

7 THE CHAIRPERSON: Thank you, Ginger  
8 Gibson. I'm going to go to Fortune Minerals.

9

10 (BRIEF PAUSE)

11

12 DR. RICK SCHRYER: Rick Schryer,  
13 Fortune Minerals. It's difficult to try to place  
14 somebody else's perception, in terms of us evaluating  
15 how they may or may not perceive a particular area. I  
16 would think the response to any perceived impacts from  
17 this project, the solution to that is continued  
18 communication and consultation with the people in order  
19 to educate them on the potential effects of the project  
20 and what the project means, in terms of changes in  
21 water quality or any of the endpoints that we have used  
22 in order to define our assessment.

23 So I think that's the best way to deal  
24 with that, is to continue to communicate and consult  
25 and educate people throughout this process so that they

1 can gain an understanding, in terms of what this  
2 project really means. Thank you.

3 THE CHAIRPERSON: Okay, thank you. Go  
4 back to Tlicho government and Ginger Gibson. And just  
5 a quick question to you, Ginger, is that -- how many  
6 more questions you have?

7 DR. GINGER GIBSON: Masi, Mr. Chair.  
8 I'd like to seek direction from you, because the -- the  
9 Developer has included the presentation of wetlands and  
10 wetlands performance. Right now we're develop -- we've  
11 -- we are presenting, we have one (1) more question on  
12 SSWQOs, but we also have a series of questions on  
13 wetlands and wetlands performance.

14 We'd like to seek your direction on  
15 whether we should be considering those in the closure  
16 section tomorrow, which is where we've actually  
17 responded ourselves to the question of wetlands and  
18 wetlands performance. Masi.

19 THE CHAIRPERSON: Okay, we'll -- we'll  
20 proceed with your questions, but again, we need to just  
21 try to limit that. We'll continue on, please.

22 DR. GINGER GIBSON: Masi. On water  
23 quality, has the Developer considered an independent  
24 environmental monitoring agency with a substantial --  
25 substantial aquatic effects monitoring program

1 component with traditional use and traditional  
2 knowledge information engaged in it for the project?  
3 Masi.

4 THE CHAIRPERSON: Thank you, Ms. Ginger  
5 Gibson. I want to go to Fortune Minerals.

6 DR. RICK SCHRYER: Thank you, Mr.  
7 Chair. Rick Schryer, Fortune Minerals. The Tlicho  
8 government made the request to Fortune Minerals some  
9 time ago to consider an independent monitoring agency  
10 for this project. We have given it consideration, but  
11 we feel that it is not necessary, given the tools, the  
12 regulatory tools, that we have in place in order to  
13 oversee this project at this time.

14 We are confident in the ability of the  
15 Wek'eezhii Land and Water Board, who now has a lot of  
16 experience with other mines, in terms of administering  
17 the water licence and land use permit for this project.  
18 There is over fifteen (15) years' experience here of --  
19 of dealing with these issues.

20 We're also confident that our  
21 commitments to work with the Tlicho people and other  
22 interested parties in the development and  
23 implementation of our aquatic effects monitoring plan,  
24 our wildlife effects monitoring plan, our closure plan  
25 which will be revisited every five (5) years.

1                   There's an awful lot of layers of  
2 protection and the checks and balances in there, that  
3 we believe that with cooperation from the Tlicho  
4 government that we can address any issues that come up  
5 and mitigate them, should they occur, without the need  
6 of a -- of an extra body overseeing this operation.  
7 Thank you.

8                   THE CHAIRPERSON:    Thank, Rick Schryer,  
9 Fortune Minerals. I'm going to go to the Tlicho  
10 Government, Ginger Gibson.

11                  DR. GINGER GIBSON:    So, Mr. Chair, we  
12 should be dealing with wetlands performance in the  
13 context of this presentation, or hold our questions on  
14 wetlands until closure discussion? I seek your  
15 direction.

16                  THE CHAIRPERSON:    Okay. Thank you.  
17 Was there -- how many questions did you have on this?

18                  DR. GINGER GIBSON:    There -- I -- I  
19 can't say exactly. There's some emerging from our  
20 party now. We were prepared for discussing this in  
21 closure. We have some, but I would -- I would say that  
22 we will have more tomorrow, certainly. We can lead  
23 with some now.

24                  THE CHAIRPERSON:    Okay. Thank you,  
25 Ginger. Well, let's proceed and then -- again, we'll

1 try -- we'll keep it to a limit and then we'll continue  
2 on with some of that tomorrow in Behchoko.

3 DR. GINGER GIBSON: Masi, Mr. Chair,  
4 for your guidance. The operation of this wetlands  
5 treatment system presents significant challenges.  
6 These can include challenges such as low biochemical  
7 reaction rates, freezing of wetland media causing  
8 short-circuiting, solution bypass, and poor -- poor  
9 performance, frozen inlet solutions, and final aeration  
10 settling ponds, and there's many challenges with  
11 monitoring and maintenance.

12 We -- we also, in our own internal  
13 deliberations, have suggested that the parallel  
14 examples that the Developer has presented of sewage  
15 treatment through wetlands is not an -- an adequate  
16 comparison, given volume of flow.

17 And so we'd like to ask the Developer  
18 and the consultants to respond to these operational  
19 challenges of extreme cold weather performance, noting  
20 that in Anchorage itself, daytime temperatures are  
21 about minus fifteen (15) and temperatures are -- the  
22 coldest ever temperature recorded there was minus  
23 thirty-nine (39).

24 So I'm not -- we're not convinced that  
25 the parallel examples are helpful and -- and we'd -- we

1 would request some clarification on these -- the  
2 management of these operational challenges of -- of  
3 extreme cold weather environments.

4 THE CHAIRPERSON: Thank you, Ginger  
5 Gibson. I'm going to go to Fortune Minerals.

6 DR. RICK SCHRYER: Rick Schryer,  
7 Fortune Minerals. Just to be clear, the -- the  
8 question is: Can these wetlands operate in a cold  
9 environment. Is that specifically the question that  
10 you want us to answer?

11 DR. GINGER GIBSON: No. Thank you for  
12 your clarification. The operational challenges in  
13 extreme cold are multiple. We've outlined what we  
14 believe them -- them to be.

15 Can the Developer and the consultant  
16 please address the operational challenges that we've  
17 identified?

18 THE CHAIRPERSON: Thank you. Rick  
19 Schryer, Fortune Minerals?

20

21 (BRIEF PAUSE)

22

23 DR. RICK SCHRYER: Thank you, Mr.  
24 Chair. Rick Schryer, Fortune Minerals. If you could  
25 repeat your list, we'll deal with them one (1) at a

1 time.

2 DR. GINGER GIBSON: Masi. Ginger  
3 Gibson, Tlicho Government. Low biochemical reaction  
4 rates; freezing of wetland media causing short-  
5 circuiting, solution bypass, and -- and generally poor  
6 performance; frozen inlet solutions; final aeration in  
7 -- in the final aeration and settling ponds; and  
8 monitoring and maintenance challenges.

9 To add to that, the volume of flow.  
10 None of the systems that are identified deal with the  
11 volume of flow that will be handled in the -- in the  
12 Nico project. So we'd like you to address the question  
13 of the volume of flow and how that would be managed  
14 during -- in particular, during freshette conditions.

15 THE CHAIRPERSON: Thank you, Ms.  
16 Ginger Gibson. I want to go to Fortune Minerals.

17 DR. MONIQUE HAAKENSEN: Dr. Monique  
18 Haakensen, Contango Strategies. I will attempt to  
19 address these one (1) at a time.

20 Low biochemical reaction rates, these  
21 wetlands function on microbial pathways. Microbes  
22 function at temperatures of minus eighty (80). There  
23 will be slowed biochemical reaction rates. And this is  
24 why we perform our piloting systems, so we can  
25 calculate what these rates are and then accommodate for

1 that in the wetland design.

2 Freezing of wetland media, yes, wetlands  
3 freeze. And when they're frozen they don't function  
4 the same as when they're free-flowing. We take this  
5 into our consideration for pilots, but when the wetland  
6 is frozen it is frozen, whether it's frozen to minus  
7 ten (10) or minus twenty (20) or minus forty (40). And  
8 so we take that into account. Frozen inlet solutions,  
9 this is a design consideration that we definitely keep  
10 in mind, the size of the inlet and number of inlets, so  
11 that this can be circumvented and does not become a  
12 problem.

13 Monitoring and maintenance challenges,  
14 I'm not clear on what the question is there. So I'll  
15 move to the next one (1), which is the volume of flow.  
16 And the volume of flow, we have built wetlands that  
17 deal with over 4 million litres a day, so we are not  
18 concerned about the volume of flow in this instance.

19 I had raised the comparison to  
20 wastewater treatment systems because -- to use that as  
21 an example of how wetlands function around the world  
22 and how there are similarities in wetland function  
23 around the world. I'm not trying to compare the system  
24 that we would build at the Nico site to a wastewater  
25 treatment wetland.



1 THE CHAIRPERSON: Okay, thank you for  
2 your answer. I'm going to go back to Ginger Gibson.

3 DR. GINGER GIBSON: Thank you for your  
4 clarifications. Will the consultant be available in  
5 the closure session as well?

6 THE CHAIRPERSON: Thank you. I'm going  
7 to go to Fortune Minerals.

8 DR. RICK SCHRYER: Rick Schryer,  
9 Fortune Minerals. Yes, she will be available to answer  
10 those questions.

11 THE CHAIRPERSON: Thank you. I'm going  
12 to go back to the Tlicho Government, Ginger Gibson.

13 DR. GINGER GIBSON: Masi. We have  
14 multiple other questions, some of which are forming  
15 now, given our own internal work that is happening on  
16 this. We also note that in addition -- in addition to  
17 myself, we have SENES consultants working with us. Dr.  
18 Stacy Fernandez is working with me on water quality  
19 issues, and she's listening remotely. We'll also be  
20 having SENES consultants working with us on closure  
21 tomorrow.

22 So we have many more questions, but we'd  
23 like to rest at this point, listen to the parties --  
24 the questions of the other parties. And we have many  
25 more questions on wetlands that we will pose tomorrow

1 in the context of closure.

2 I'll just turn to my colleagues to see  
3 if there's any other questions.

4 MR. JOHN BACHAND: Just one (1) moment,  
5 Mr. Chair.

6

7 (BRIEF PAUSE)

8

9 DR. GINGER GIBSON: Mr. Chair, we'll --  
10 we'll rest now. We'll -- as I say, we have many  
11 questions that we will continue on wetlands tomorrow.  
12 Masi.

13 THE CHAIRPERSON: Thank you, Ginger  
14 Gibson, from the Tlicho Government. Again, just to all  
15 parties, you know, again, we've got a time limit.  
16 We've still got another thirty-five (35) minutes. And  
17 we'll continue on as best we can. And, also, as I  
18 think Ginger mentioned, we still have two (2) more  
19 days. And we'll continue to put forward more questions  
20 by parties. So we'll move on.

21 I'm going to go to -- next is the  
22 Yellowknives Dene First Nation, if there's any  
23 questions to Fortune Minerals on their two (2)  
24 presentations here today.

25 MR. TODD SLACK: Hi, Mr. Chair.

1 Thanks. My name's Todd Slack. And I'm open to  
2 direction here. But I have a question in regards to  
3 something Mr. Schryer just said. And I'm just seeing -  
4 - wondering if we can reach an agreement, in terms of  
5 clarity.

6 You had just indicated that there are  
7 regulators for all the concerns, and that was  
8 potentially one (1) reason not to have an independent  
9 monitoring board or independent oversight.

10 In your understanding, what regulation  
11 is there for the WEMP and what regulation is there  
12 surrounding air quality? Regulator, pardon me.

13 THE CHAIRPERSON: Okay, thank you,  
14 YKDFN, Todd Slack. I'm going to go to Fortune  
15 Minerals.

16 DR. RICK SCHRYER: Rick Schryer,  
17 Fortune Minerals. My understanding is that there is no  
18 -- currently no re -- regulatory requirement for  
19 wildlife effects monitoring plan. And there are  
20 currently no prescribed standards for air quality.

21 That being said, what happens for air  
22 quality is that standards are used from other  
23 jurisdictions in lieu of not having NWT-based  
24 standards. I will add to that though that Fortune  
25 Minerals has made a commitment to both the GNWT and the

1 Tlicho people that we will develop a wildlife effects  
2 monitoring plan, and we fully intend to proceed with  
3 that.

4 In terms of air quality, we're already  
5 also made commitments, in terms of the standards that  
6 we will meet for our incinerator and for our air  
7 quality on site. And we will be moving forward with  
8 the development of an air quality management plan and  
9 an incinerator management plan in order to demonstrate  
10 how we will meet those criteria.

11 THE CHAIRPERSON: Thank you, Rick  
12 Schryer. I'll move on to YKDFN, Todd -- Todd Slack.

13 MR. TODD SLACK: Thanks to the  
14 Developer and thanks, Mr. Chair. We'll be returning to  
15 these in the next days.

16 THE CHAIRPERSON: Thank you. I'm going  
17 to go on to Akaitcho IMA office. Is there anybody here  
18 that want to question?

19 No? Okay. I'm going to continue on to  
20 the North Slave Metis Alliance. If -- is there any  
21 questions for the Fortune Minerals on their  
22 presentation here this morning?

23 MR. BILL ENGE: Yes. Thank you, Mr.  
24 Chairman. Bill Enge here with the North Slave Metis  
25 Alliance. I have a few questions.

1                   First of all, I just want to make sure I  
2 understand the mechanics of what Fortune Minerals is  
3 proposing, in terms of filtering the contaminants out  
4 of the water system. Do I understand that when the  
5 contaminants are placed into the water system, that  
6 they would use plants to soak up the contaminants and  
7 then the plants, in turn, would then deposit  
8 contaminants back into the soil, thereby removing  
9 contaminants from the -- the water and placing it back  
10 into the soil from whence it came?

11                   And then, once the -- once they're  
12 satisfied that this process is working, they would not  
13 need any further oversight, and they would walk away  
14 from the -- the closure?

15                   THE CHAIRPERSON: Thank you, Bill Enge,  
16 North Slave Metis. Fortune Minerals...?

17                   DR. RICK SCHRYER: Rick Schryer,  
18 Fortune Minerals. I'm going to answer the first part  
19 of the question, and then I'm going to pass it on to  
20 Dr. Monique Haakensen to respond to the rest of it.

21                   I just wanted to make sure that  
22 everybody understood that in the sequence that Dr.  
23 Haakensen explained in terms of the pilot plant studies  
24 and the demonstra -- demonstration-scale wetlands,  
25 constructed wetlands, that we would build, this would

1 be done early in operations so that we could  
2 demonstrate that this technology works before we move  
3 to a full-scale model.

4                   It's out intention to build this early  
5 in operations so that we can demonstrate this  
6 technology all the way through our operations and have,  
7 I don't know, ten (10) or fifteen (15) years of data  
8 before we even get to closure, to demonstrate that this  
9 technology works.

10                   So in terms of the sequencing and -- and  
11 understanding of how these -- these wetlands will be --  
12 demonstrate their performance, we believe that we have  
13 a plan that will address the concerns that have been  
14 brought forward.

15                   And I'll pass off the -- the rest of  
16 this response to Dr. Haakensen to talk about sediments.

17                   DR. MONIQUE HAAKENSEN:   Dr. Monique  
18 Haakensen, Contango Strategies. In regards to the  
19 plants -- sorry. In regards to the plants uptaking  
20 contaminants, the wetlands are designed so that the  
21 plants do not take up any contaminants. And this is  
22 very critical to our design, because if a plant were to  
23 take up a contaminant, as has been mentioned, there are  
24 concerns.

25                   Instead, these wetlands are designed so

1 that the plants, the water, and the soil create the  
2 right environment for the microbes to remove the  
3 contaminants from the water, much like you see right  
4 now in the grid pond system. These microbes, which are  
5 natural and already there in the sediments, they work  
6 with these conditions to remove the contaminants and  
7 put them into a mineralized, stable, non-soluble form  
8 into the sediments, into the soil. Thank you.

9 THE CHAIRPERSON: Thank you, Dr.  
10 Hopkins (sic), Fortune Minerals. North Slave Metis,  
11 Bill Enge...?

12 MR. BILL ENGE: Yes. Thank you, Mr.  
13 Chairman. So do I understand the manner by which  
14 Fortune plans to undertake the wetlands as a filter  
15 system to experiment while the mine is in actual  
16 operation, as opposed to having tested it before it  
17 puts it into operation, to ensure that it actually  
18 works?

19 THE CHAIRPERSON: Thank you, Bill Enge.  
20 Fortune Minerals...?

21 DR. RICK SCHRYER: Rick Schryer,  
22 Fortune Minerals. As we've stated before, our primary  
23 water treatment system during operations will be a  
24 reverse osmosis system. However, we want to take  
25 advantage of the opportunity during closures to build

1 the wetland and run some of the effluent through it in  
2 order to demonstrate that it works so that everybody's  
3 comfortable, by the time we get to closure, that they  
4 know the wetland is working. Howe -- and we will be  
5 testing that water to make sure it meets site-specific  
6 water quality criteria.

7 The RO system isn't going anywhere. The  
8 'R' -- the reverse osmosis system will be in place at  
9 the mine to deal with any water treatment issues that  
10 need to be dealt with.

11 All we're saying is that in addition to  
12 the RO, we're going to be testing the wetland to make -  
13 - to -- and putting water through it to make sure it  
14 works. If it doesn't work, we'll collect the water at  
15 the bottom of the wetland and put it back into the RO  
16 system. Regardless of -- of how we do it, we are going  
17 to meet our site-specific water quality objectives.

18 But we want to take advantage of an  
19 opportunity here to be able to put water from the CDF,  
20 the seepage water, through the wetland and demonstrate  
21 that it works. But -- and so we will -- we will meet  
22 our site-specific water quality objectives.

23 THE CHAIRPERSON: Thank you, Rick  
24 Schryer with Fortune Minerals. Bill Enge, North Slave  
25 Metis...?



1 MR. BILL ENGE: Yes, thank you, Mr.  
2 Chairman. I -- I think the -- what I understand by the  
3 response by Mr. Schryer is that, indeed, they are going  
4 to be experimenting using a wetland filter system while  
5 the mine is actually in operation but that we're not to  
6 worry about the contaminants that are going to be  
7 placed in the water, because he's going to be using a  
8 reverse osmosis system which would eliminate the  
9 contaminants.

10 Now if that were so easy to do, I wonder  
11 why the heck it is that AANDC isn't using a reverse  
12 osmosis system to get rid of the ars -- arsenic  
13 trioxide that is latent in the grounds of Giant Mine?

14 I'd like to know, as I understand it,  
15 there's going to be arsenic released into the watershed  
16 from the mine. And does reverse osmosis and wetlands  
17 filtering remove that contaminant from the watershed?

18 THE CHAIRPERSON: Thank you, Bill Enge,  
19 North Slave Metis. Fortune Minerals...?

20

21 (BRIEF PAUSE)

22

23 DR. MONIQUE HAAKENSEN: Dr. Monique  
24 Haakensen, Contango Strategies. I would like to  
25 clarify that it is not experimental. It is a custom

1 design. We will have already confirmed how these work  
2 based on experience and our pilot-scale systems. When  
3 we put in the demonstration scale, this isn't to  
4 experiment to see if they will work. This is to build  
5 confidence in those who are monitoring the project.

6 In regards to the arsenic, arsenic is  
7 currently being treated by the wetlands and grid pond  
8 system through natural processes. As far as  
9 constructed wetlands are concerned, our team is  
10 currently even building constructed wetlands to remove  
11 large amounts of arsenic from water that is going to be  
12 used for drinking water for small communities. So we  
13 are confident that we can remove arsenic in a safe way.

14 THE CHAIRPERSON: Thank you, Dr.  
15 Hopkins (sic) with Fortune Minerals. North Slave  
16 Metis, Bill Enge...?

17 MR. BILL ENGE: Yes, thank you, Mr.  
18 Chairman. I can't help but be a little sceptical with  
19 regard to drinking water that has been contaminated  
20 with arsenic after having experienced that problem  
21 around here in Yellowknife. I certainly would not want  
22 to be the one (1) to try and see if that water is safe  
23 to drink.

24 In any case, that being said, I have a  
25 concern here because what we're being asked to do is

1 approve this mine without an independent environmental  
2 monitoring agency to oversee how the mine operates and  
3 what kind of damage it may do, or is doing, to the  
4 environment.

5                   Quite frankly, I don't believe that the  
6 Wek'eezhii Renewable Resources Board or the Mackenzie  
7 Valley Environmental Impact Review Board or the  
8 Mackenzie Land and Water Board have the time and  
9 resources to properly provide oversight into each and  
10 every single mine that goes on in this territory.

11                   We have three (3) operating oversight  
12 agencies here in the North Slave region right now with  
13 respect to the three (3) operating diamond mines. And  
14 I think that, based on that experience we need to do  
15 the same here, considering the serious contaminants  
16 that are going to be released into the environment.

17                   And so with all due respect to Mr.  
18 Schryer's contention that an independent environmental  
19 monitoring agency is unnecessary because the various  
20 federal and territorial boards can do that job, I -- I  
21 quite frankly am not confident that that's doable.

22                   And I can also say that arsenic is only  
23 one (1) contaminant that we're talking about. What I'd  
24 like to hear from Fortune Mineral representatives today  
25 is what -- what are the rest of the contaminants going

1 to be and how does reverse osmosis remove them from the  
2 -- the water? Thank you.

3 THE CHAIRPERSON: Thank you, Bill  
4 Enge, North Slave Metis. Before I go to Fortune  
5 Minerals and -- I just had this quick question to Bill  
6 Enge. Is there -- how many more questions you may  
7 have, just so that -- because it's twenty (20) to 12:00  
8 now and I still got a few presenters yet to go, and  
9 then we still have two (2) more days yet to go in  
10 Behchoko to ask further questions.

11 MR. BILL ENGE: Oh, thank you, Mr.  
12 Chairman. Indeed, there are two (2) additional days  
13 that we can ask questions. So I would leave this as my  
14 last question and give an opportunity to another group  
15 to ask the proponent here questions.

16 I'll make the one (1) that I just asked  
17 my last one (1). Thank you.

18 THE CHAIRPERSON: Okay. Thank you.  
19 I'm going to -- I'm not sure if Fortune Mineral wants  
20 to respond to that. Fortune Minerals...?

21 MR. JOHN FAITHFUL: John Faithful, Mr.  
22 Chair. In response to the question other chemicals of  
23 potential concern were considered in the water quality  
24 assessment and they -- the information is provided in  
25 the Developer's Assessment Report, as well as a number

1 of Information Request responses and subsequent  
2 documentation.

3 They are also considered in -- in the  
4 removal capacity of what -- of the RO plant. Thank  
5 you.

6 THE CHAIRPERSON: Thank you. And I  
7 just want to make a note that, Bill, you raised the  
8 issue about the independent monitoring agency. I just  
9 wanted to let you know that the Board is taking the  
10 notes from all presenters here today, and then they'll  
11 also take that into consideration. Thank you.

12 I want to go on to the next presen --  
13 presenters is the Fisheries and Oceans Canada. Is  
14 there any questions for the Fortune Minerals on their  
15 PowerPoint presentation here this morning?

16 MS. SARAH OLIVIER: Yes, thank you, Mr.  
17 Chair. This is Sarah Olivier with the Department of  
18 Fisheries and Oceans. We don't have any questions for  
19 Fortune at this time. Thank you.

20 THE CHAIRPERSON: Thank you. I'm  
21 going to go on to the Government of Northwest  
22 Territories. Is there anybody here representing the  
23 Government of Northwest Territories, questions for  
24 Fortune Minerals on their presentation here this  
25 morning?

1 MS. LORETTA RANSOM: Good morning.  
2 This is Loretta Ransom with the Government of Northwest  
3 Territories. We don't have any questions at this time.  
4 Thank you.

5 THE CHAIRPERSON: Thank you. I'm  
6 going to continue on with Aboriginal Affairs Northern  
7 Development Canada, AANDC. Is there any questions for  
8 Fortune Minerals on their presentation here this  
9 morning?

10

11 (BRIEF PAUSE)

12

13 MR. ROBERT JENKINS: Thank you, Mr.  
14 Chair. It's Robert Jenkins with Aboriginal Affairs.  
15 We do have four (4) questions on site-specific water  
16 quality objectives. We'll ask those today.

17 We do have some questions on wetland  
18 treatment. We'll reserve those for tomorrow in  
19 Behchoko. I'm going to pass the mic over to Mr. Nathen  
20 Richea, who is with our Water Resources Division.

21 MR. NATHEN RICHEA: Thank you, Mr.  
22 Chair. It's Nathen Richea with the Water Resources  
23 Division. The first question I have is Fortune has  
24 indicated in many instances that their proposed site-  
25 specific water quality objectives are not to be used as

1 effluent quality criteria.

2                   However, many of their site-specific  
3 water quality objectives are toxicity-based thresholds.  
4 This means if concentrations of parameters of concern  
5 exceed the proposed objective or threshold, which is  
6 what one (1) would expect to occur prior to complete  
7 mixing in Peanut Lake, adverse effects could occur  
8 within Peanut Lake.

9                   Can Fortune explain why lower  
10 concentrations that account for mixing and attenuation  
11 at the end of their diffuser in Peanut Lake cannot be  
12 used to derive much lower site-specific water quality  
13 objectives to protect -- to protect downstream water  
14 quality. In doing so, keeping in mind that Fortune has  
15 committed to dust mitigation strategies for their  
16 operation. Thank you.

17                   THE CHAIRPERSON: Thank you, Nathen  
18 Richea, with AANDC. Or -- I'll go to Fortune Minerals.

19                   MR. JOHN FAITHFUL: Mr. Chair, John  
20 Faithful. Am I going to ask Rein Jaagumagi to provide  
21 a response to that question. Thank you.

22                   MR. REIN JAAGUMAGI: Rein Jaagumagi,  
23 Golder Associates. In developing the site-specific  
24 water quality objectives we took a conservative  
25 approach such that we based the -- the criteria that we

1 developed on chronic test results and with sensitive  
2 organisms considering their sensitive life stages.

3 So we feel confident that even at the  
4 point of -- of discharge there would be no adverse  
5 effect prior to any full-scale mixing within the  
6 receiving water body.

7 THE CHAIRPERSON: Thank you. Going  
8 back to AANDC. We'll go back to Nathen Richea. I  
9 believe it was your first question on the floor.  
10 Moving to your next question.

11 MR. NATHEN RICHEA: Thank you, Mr.  
12 Chair. It's Nathen Richea, with the Water Resources  
13 Division of Aboriginal Affairs. My question is a  
14 clarification. Are they proposing to use the site-  
15 specific water quality objectives to apply at the  
16 outlet of Peanut Lake, or are they proposing to use the  
17 site-specific water quality objectives to be applied at  
18 the end of pipe?

19 Because the concentrations will be  
20 different based on dilution through the proposed  
21 diffuser. Thanks.

22 THE CHAIRPERSON: Thank you, AANDC,  
23 Nathen Richea. I'll go back to Fortune Minerals.

24 MR. JOHN FAITHFUL: Mr. Chair, John  
25 Faithful. We've indicated that we would meet the site-



1 speci -- the proposed site-specific water quality  
2 objectives at the outlet of Peanut Lake.

3 THE CHAIRPERSON: Thank you. I'll go  
4 back to AANDC, Nathen Richea, for your third question.

5 MR. NATHEN RICHEA: Thank you, Mr.  
6 Chair. My question that follows that would be why has  
7 Fortune insisted on using toxicity thresholds as site-  
8 specific water quality objectives protect the qual --  
9 water quality for their project. Does Fortune propose  
10 to discharge up to these toxicity thresholds within  
11 Peanut Lake?

12 THE CHAIRPERSON: Thank you, Richea,  
13 Nathen Richea, with AANDC. I'll go to Fortune  
14 Minerals.

15 MR. REIN JAAGUMAGI: Rein Jaagumagi,  
16 Golder Associates. We develop the -- the site-specific  
17 water quality objectives based on toxicity thresholds  
18 similar to the approach that the Canadian Council of  
19 Ministers of the Environment, known as CCME, uses to  
20 develop the Canadian water quality guidelines.

21 These are all toxicity based. And they  
22 are -- are generally based to be protective of aquatic  
23 life within the -- the policy objective to protect the  
24 most sensitive species in the most sensitive life stage  
25 during chronic exposure.

1                   So that's the -- the general policy  
2   objective behind developing any kind of guideline. And  
3   they are typically based on toxicity thresholds. Thank  
4   you.

5                   THE CHAIRPERSON: Thank you. I'm going  
6   to go to AANDC. I think -- Mr. Jenkins, I think you  
7   mentioned you had four (4) questions. So your final  
8   question?

9                   MR. NATHEN RICHEA: Thank you, Mr.  
10   Chair. It's Nathen Richea, with the Water Resources  
11   Division. In the interest of time for today, this will  
12   be my last question. But if I have subsequent  
13   questions, I'll ask them in the remaining sessions, for  
14   tomorrow and the day after.

15                  Mr. Chair, my question is it appears  
16   that effluent quality, as a result of the reverse  
17   osmosis treatment system, will meet Canadian Council  
18   for Ministers of -- of the Ministers of the Environment  
19   for the protection of aquatic life for most parameters  
20   at the end of pipe.

21                  It also appears that using the dilution  
22   factors from the proposed diffuser, as described in  
23   appendix 7-4 or the de -- developers' assessment  
24   report, mix -- dilution ratios will range from twenty  
25   (20) to forty (40) times, which means that the

1 concentrations could be as low as twenty (20) times  
2 below CCME aquatic life protection guidelines at the  
3 outside of the mixing zone.

4 Can Fortune explain why they still  
5 propose to use toxicity thresholds as site-specific  
6 water quality objectives at the outlet of Peanut Lake?

7 THE CHAIRPERSON: Thank you, Nathen  
8 Richea, with AANDC. And, yes, you'll also have an  
9 opportunity in Behchoko to ask further questions in the  
10 next two (2) days, so I want to go to Fortune Minerals.

11

12 (BRIEF PAUSE)

13

14 MR. JOHN FAITHFUL: John Faithful, Mr.  
15 Chair. I mentioned earlier that the -- the derivation  
16 of the -- of the mixing zone was to -- to be the -- the  
17 outlet of Peanut Lake.

18 The rationale for that is that -- is --  
19 is really given the size of -- of Peanut Lake, it is  
20 relatively small volume. The -- the effect of mixing  
21 within Peanut Lake is very dependent on the -- on the  
22 hydrological conditions. In a very dry year there'll  
23 be even less water. Now the -- Mr. Richea indicated  
24 that there were dilution potentials based on the -- the  
25 Information Request response to EC2-4.

1                   Of the course of the year there may be  
2 dilution, but there's also accumulation of mass in  
3 terms of the discharge. And given the small volume the  
4 -- particular in the winter periods, the -- the lake is  
5 -- is an isolated lake.

6                   As a consequence, by indicating that we  
7 will -- that the site -- proposed site-specific water  
8 quality objectives are met within Peanut Lake it  
9 accounts for that. It allows for that accumulation so  
10 that the site-specific water quality objectives are not  
11 exceeded in any given time under the range of  
12 hydrological conditions that we have seen in -- in the  
13 Peanut Lake watershed. Thank you.

14                  THE CHAIRPERSON:     Thank you, John  
15 Faithful, of the -- Fortune Minerals. Thank you. I  
16 want to thank AANDC for their questions. I'm going to  
17 continue on. I have Environment Canada. Is there any  
18 questions for the -- Fortune Minerals on their two (2)  
19 presentations here this morning?

20

21   (BRIEF PAUSE)

22

23                  MR. CAREY OGILVIE:    Thank you, Mr.  
24 Chairman, Carey Ogilvie, Environment Canada, no  
25 questions.

1 THE CHAIRPERSON: Thank you very much,  
2 sir, Environment Canada. I want to go to Transport  
3 Canada. Any questions to Fortune Minerals on their two  
4 (2) presentations here this morning?

5 MR. DALE KIRKLAND: Dale Kirkland,  
6 Transport Canada, no questions, Mr. Chair.

7 THE CHAIRPERSON: Thank you. I'm  
8 going to go to Natural Resources Canada. Is there any  
9 questions for the presenters, Fortune Minerals, on  
10 their two (2) presentations here this morning?

11 MR. JOHN KING: John King, Natural  
12 Resources Canada. We have no questions for Fortune at  
13 this time. Masi.

14 THE CHAIRPERSON: Thank you. I'm  
15 going to proceed with the Review Board staff if we can  
16 and -- up to noon, then if we run over we'll continue  
17 on after lunch. I'm going to go to Dr. Kathy Richter  
18 (sic) with the Review Board.

19 DR. KATHY RACHER: Kathy Racher for the  
20 Board. As I'm sure you've read INAC's -- or sorry,  
21 AANDC's technical report, in it they recommend a series  
22 of narrative statements for -- for setting site-  
23 specific water quality objectives instead of setting  
24 actual numbers during this process.

25 And I just wonder -- I could read them

1 out for you if you -- if you like, but I'm sure you've  
2 read them. I -- I -- my question is whether you  
3 believe that those statements would remain true  
4 throughout construction and operation and closure, or  
5 if you have any changes, or additions, or deletions you  
6 would make to those statements.

7 THE CHAIRPERSON: Thank you, Dr.  
8 Racher. I'm going to go to Fortune Minerals.

9 MR. JOHN FAITHFUL: Mr. Chair. In the  
10 technical report we do acknowledge the -- the narrative  
11 statements that have been used -- have been suggested  
12 by AANDC to describe the level of protection to be  
13 afforded to the aquatic receiving environment.

14 Now, with -- with the assessment  
15 approach that we have used in the developer's  
16 assessment report, we use a very similar narrative  
17 statement in terms of our assessment endpoint, or  
18 assessment endpoints, that drive what our focus in  
19 terms of the effects analysis is.

20 And I think the -- the key -- one (1) of  
21 the key assessment endpoints that we have within our  
22 assessment is the -- is that the -- the suitability of  
23 water quality remains to maintain a viable aquatic  
24 ecosystem. And so that is -- that is consistent with  
25 the narrative approach that -- that we believe that

1 AANDC is -- is suggesting.

2                   We -- we don't see any particular  
3 change. They've probably broken out a little bit more  
4 in terms of the suggestions that -- that have been  
5 presented by -- that -- that have been presented by  
6 AANDC.

7                   The -- the one (1) that -- that I would  
8 suggest in terms of the wording be -- be reconsidered  
9 by AANDC is the -- is the water quality in the Marian  
10 River remains unchanged.

11                   I think what we would -- what we would  
12 consider there for -- would be that the water quality  
13 in the Marian Riv -- River remains substantially  
14 unaltered. And that's consistent with the -- the  
15 wording used that -- that is provided in the Tlicho  
16 agreement, 21.3.3. Thank you.

17                   THE CHAIRPERSON:     Thank you, John  
18 Faithful, with Fortune Minerals. I'm going to go back  
19 to the Review Board staff, Dr. Kathy Racher.

20                   DR. KATHY RACHER:    Kathy Racher for the  
21 Board. Thank you for that. And -- and just to clarify  
22 that based on -- on the Tlicho presentation that's  
23 still upcoming, the -- those statements, the ones --  
24 all the ones before the one (1) about Marian River,  
25 those -- those would apply to all the lakes in the

1 system and -- and most especially I'm looking for an  
2 answer for Burke Lake, like in terms of the where of  
3 where those apply.

4 THE CHAIRPERSON: Thank you, Dr. Rac -  
5 - Kathy Racher. I'm going to go to the Fortune  
6 Minerals.

7

8 (BRIEF PAUSE)

9

10 MR. JOHN FAITHFUL: John Faithful, Mr.  
11 Chair. I -- I apologize. I -- I missed the question  
12 in that -- from Ms. Racher. If she could please repeat  
13 it.

14 THE CHAIRPERSON: Thank you. I'll go  
15 back to the Review Board staff, Dr. Kathy Racher.

16 DR. KATHY RACHER: Kathy Racher for the  
17 Board. I just want to make sure that those -- you said  
18 those statements would apply, essentially that they're  
19 very similar to what you -- what your conclusions you  
20 drew in your own DAR. I just want to make sure those  
21 apply at all the -- the lakes in the chain, and most  
22 especially Burke Lake and -- and Marian River.

23 THE CHAIRPERSON: Thank you, Dr. Kathy  
24 Racher. I'm going to go to the Fortune Minerals.

25 MR. JOHN FAITHFUL: Mr. Chair, John



1 Faithful. The answer is yes, Dr. Racher.

2 THE CHAIRPERSON: Thank you. Review  
3 Board staff, Dr. Kathy Racher.

4 DR. KATHY RACHER: Kathy Racher for the  
5 Board. I have just a couple of questions of  
6 clarification about your August 20th memo. In  
7 Attachment B of that -- of that memo there's a summary  
8 of baseline and post-closure receiving water qual -  
9 quality modelling predictions.

10 One (1) of my questions is when it --  
11 when you've -- you've estimated post-closure  
12 concentrations of contaminants downstream of the  
13 project, both with and without wetlands, which I  
14 thought was a very good idea and I appreciate that --  
15 your -- your efforts in doing so.

16 I just want to clarify for Peanut Lake,  
17 Burke Lake, and Marian River, when it says "with  
18 wetlands," do you mean both wetlands that you're  
19 considering, the one (1) upstream, the one (1) before  
20 Nico, and the one (1) before Peanut?

21 THE CHAIRPERSON: Thank you, Dr. Kathy  
22 Racher. I'm going to go to Fortune Minerals.

23 MR. JOHN FAITHFUL: Mr. Chair, John  
24 Faithful. The -- the answer to the question is yes,  
25 that both wetlands receiving drainage from the seepage

1 collection pond and the open pit to Nico -- sorry,  
2 seepage collection ponds to Nico and the open pit  
3 drainage to Peanut have been -- take into account  
4 wetland systems.

5 THE CHAIRPERSON: Thank you, John  
6 Faithful of Fortune Minerals. Review Board staff, Dr.  
7 Kathy Racher.

8 DR. KATHY RACHER: Kathy Racher for the  
9 Board. I -- I notice in that table as well when we  
10 look at the concentrations of metals in Marian River  
11 that are predicted, with or without wetlin -- wetlands,  
12 excuse me, they're almost all below the average  
13 baseline values.

14 It appears that you're improving the  
15 water quality in -- in Marian River, or you're  
16 predicting to approve -- improve it. And I -- I just  
17 wondered if you could sort of explain the modelling  
18 process and -- and why that would turn out to be like  
19 that.

20 THE CHAIRPERSON: Thank you, Dr. Kathy  
21 Racher. I'm going to the -- Fortune Minerals.

22

23 (BRIEF PAUSE)

24

25 THE CHAIRPERSON: Maybe Fortune

1 Minerals, I think -- Dr. Kathy Racher. What we'll do  
2 is we'll stop here. We'll come back at 1:00. And you  
3 could -- we'll continue on the questioning by the  
4 Review Board staff after we get back from lunch. And  
5 you got some time to think about that one. And we'll  
6 stop here. One o'clock.

7

8 --- Upon recessing at 11:58 a.m.

9 --- Upon resuming at 1:08 p.m.

10

11 THE CHAIRPERSON: Okay. Thank you.

12 Well, we'll continue on with the -- the public hearing  
13 here today. Again, it's on Nico project EA0809-004 on  
14 Fortune Minerals. Before I start, I -- I just wanted to  
15 make a couple of quick comments, and then we'll  
16 continue on with questioning.

17 First of all, I -- I just -- this  
18 morning, it was brought to my attention that we were  
19 making -- I was making comments in regards to  
20 individuals with their titles, and I just wanted to  
21 recognize and acknowledge Kathy -- I'd like to just  
22 acknowledge that Ginger Gibson is also a doctor, and --  
23 and Rick Schryer as well. So I just want to make sure  
24 we get that for the record.

25 And -- and in case I do miss, mainly for

1 the recording, if -- if it does come up and I miss it,  
2 I'd just like to make sure, for the record, that it is  
3 added on to -- to that so it's there, so -- just so  
4 that we recognize the individuals.

5                   Also, this morning, we had some -- a  
6 couple of errors, so I just want to just maybe make a  
7 couple of comments here. This morning, there was a  
8 little confusion in the -- in my opening comments. I  
9 want to make a few clarifying comments so that there's  
10 no confusion.

11                   As you know, the Board held a community  
12 hearing in Whati on Monday. Today we began the  
13 technical portion of the Nico public hearing. The  
14 technical hearing will continue in Behchoko tomorrow  
15 and Friday. We are already into the process. I -- I  
16 don't want to explain any further.

17                   We will have a series of presentations  
18 on various topics by Fortune Minerals, questions and --  
19 and answers will follow. The parties to get together,  
20 get -- sorry, the parties get to make presentations,  
21 too, as set out in the -- in the agenda, and we'll  
22 continue on with the answers and questions as follows.

23                   As indicated on the agenda, time  
24 requirements were discussed and set after the pre-  
25 hearing conference. So, again, I just want to just

1 remind everybody to govern themselves according to the  
2 time in the agenda we have.

3                   This process will continue in Behchoko  
4 as well although we're having some opening comments by  
5 the Tlicho Government and by Fortune Minerals. I hope  
6 that that makes the -- the -- this clear. There --  
7 there are separate agendas for Behchoko. And if you  
8 have questions, you could see our staff or counsel at  
9 the next -- at the next break, if you have any  
10 comments.

11                   So, with that, I just want to just make  
12 note of that, and we will continue on with the  
13 questioning from our -- the Review Board staff. I'll  
14 go to Kathy -- Dr. Kathy Richter (sic) to Fortune  
15 Minerals on their presentation this morning.

16                   Also, before I go to Kathy, I'm sorry,  
17 I've been asked to -- Fortune Minerals, I think they  
18 want to make a quick comment as well, so go ahead  
19 there, Fortune Minerals.

20

21                   (BRIEF PAUSE)

22

23                   DR. RICK SCHRYER: Thank you, Mr.  
24 Chairman. Rick Schryer, Fortune Minerals. There are  
25 actually just two (2) points of clarification that we

1 wanted to provide. One (1) was on the -- like to re --  
2 revisit my -- our answer on the -- on the issue of  
3 perceived risks. We just wanted to read a statement  
4 into the record. There's a reference here from the  
5 Health Canada Decision-Making Framework for  
6 Identifying, Assessing, and Managing Health Risks.  
7 It's from August 2000. The statement is:

8 "Although individuals may hold  
9 opinions about what is acceptable,  
10 there are often no objective measures  
11 for determining acceptability. What  
12 is acceptable to one (1) group or  
13 individual may be unacceptable to  
14 another. Given this, attempts may be  
15 made to determine acceptability from  
16 the per -- perspectives of a range of  
17 interests and affected parties."

18 So that was just in relation to the  
19 question that was asked to us by Dr. Gibson in terms of  
20 providing some context to that.

21 And -- and the question concerning the  
22 perceptions around the Rayrock Mine versus our project,  
23 which is a different type of project. We're not a  
24 uranium mine, and -- and obviously the Rayrock project  
25 was developed in the '50s.

1                   The second request we had was, we  
2   thought it might be helpful to the Board and to the  
3   audience members if we just played that one (1) slide  
4   that shows the water flow that we tried to show  
5   yesterday, or in -- on Monday in Whati, that it didn't  
6   show up very well. Nobody could see it.

7                   We thought if we could just show that  
8   one (1) slide it would help people understand the flow  
9   of water from the project and its relationship to  
10   Hislop Lake. So we're wondering if the Board was  
11   interested in showing that slide. Especially since it  
12   -- like I said, it didn't show up very well in Whati.

13                  THE CHAIRPERSON:    Okay, thank you.  
14   Since its relevant to this public hearing we'll go  
15   ahead and if you could pull it up and then we'll just  
16   go through that really quick. Then we'll go back to my  
17   questions.

18                  While we're doing that, I also want to  
19   acknowledge the -- the Chairman for the Mackenzie  
20   Valley Land and Water Board, Willard Hagen, in the  
21   back. He's put -- put a hand there. So I'm not sure  
22   if there's anybody else that I can recognize here. So  
23   with that, okay, I'll -- Rick, if you could just go  
24   ahead and do that.

25                  We have another technical issue. While

1 that's happening, I just -- a little comment here, I  
2 guess, to -- I just -- just want to let -- years ago  
3 when sitting chief for the community and the -- one (1)  
4 person come up -- come up to me and said, Hey, I heard  
5 you're the most respected man on the reserve. I said,  
6 No I'm not. He said, Well, then -- and oh yeah, he  
7 said, This guy asked me if there's another guy who's  
8 more respected than you, he said. So I said, who's  
9 that. He said, the bingo caller. So anyway, I always  
10 get a kick out of that. So I just want to just keep  
11 people entertained as we wait here and get this thing  
12 sorted out.

13 DR. RICK SCHRYER: Mr. Chairman, Rick  
14 Schryer, Fortune Minerals. What I could suggest,  
15 though, is that while we're waiting for the technical  
16 difficulties to be resolved, there was an outstanding  
17 question that needed to be answered from Dr. Racher.

18 THE CHAIRPERSON: Yeah.

19 DR. RICK SCHRYER: And I thought maybe  
20 we could do that while we're waiting for this to get  
21 resolved.

22 THE CHAIRPERSON: Absolutely. Okay.  
23 Well, let's continue on. While -- I'm not sure what  
24 the issue is, but if we could get that sorted out. If  
25 not, we'll -- if we can do it today, or maybe tomorrow



1 morning in Behchoko, and we could continue. But I'd  
2 like to get through that. Okay, I'll go to Fortune  
3 Minerals in to -- in response to Dr. Kathy Racher's  
4 comments this morning.

5 MR. JOHN FAITHFUL: Mr. Chair, John  
6 Faithful. Dr. Racher raised a question with respect to  
7 one (1) of the tables that was presented in the closure  
8 memo dated the 20th of August that was submitted to the  
9 Board, whereby some parameters appeared in model  
10 concentrations, modelled average concentrations, above  
11 that which was presented for the -- the average  
12 baseline concentrations within the Marian River.

13 The data that was presented in that  
14 table was specifically used for -- for the risk  
15 assessment. The baseline data column represents the  
16 average of the measured baseline data, which is  
17 compared to the average of the model predictions for  
18 water quality in Marian Riv -- in the Marian River.  
19 This is being done so as to not ov -- not underest --  
20 not overestimate the -- the risk to aquatic life.

21 Within the Marian River system, flows  
22 fluctuate quite dramatically over an annual and a  
23 seasonal basis. And as a consequence, measured  
24 baseline data also fluctuate. The most reasonable  
25 approach adopted by the risk team to determine risk is

1 to use the average measured concentrations of the  
2 baseline again, and compare it to the average model  
3 concentrations, because over time aquatic biota are  
4 going -- going to be exposed to a concentration that  
5 averages out. Thank you.

6 THE CHAIRPERSON: Okay, thank you.  
7 Maybe I'll go to Fortune Minerals. We -- we're still  
8 having some technical issues here on this, Rick. Is  
9 there any way we could either put this off tomorrow, or  
10 do you want to take two (2) seconds and do this? Okay.

11 DR. RICK SCHRYER: We would like to  
12 present the slide at some point, whether it's now or  
13 later, at the -- the indulgence of the Board.

14 THE CHAIRPERSON: Well, if it's  
15 relevant -- if it's relevant we'll continue on then.  
16 If we could keep it brief. I'd like to continue on  
17 with the questioning.

18 MR. JOHN FAITHFUL: John Faithful, Mr.  
19 Chair. Just an additional point. The data that was --  
20 we presented in the -- in the closure memo was also  
21 focussed on the -- the average model concentrations.

22 There was a request made in -- prior to  
23 the -- the preparation of the closure memo that more  
24 reasonable estimates of model predictions be presented  
25 so as not to -- to confuse the -- the readers with

1 respect to the conservatism or the high level of  
2 conservatism that had been provided not only in the  
3 developer assessments report, water quality assessment,  
4 but also in any subsequent technical memo or IR  
5 response that have been provided prior to the  
6 submission of the closure memo. Thank you.

7 THE CHAIRPERSON: Thank you. Go ahead,  
8 Rick. We could -- quickly walk us through this.

9 DR. RICK SCHRYER: Rick Schryer,  
10 Fortune Mishal -- Minerals. Thank you, Mr. Chairman.  
11 I'll go quickly here. I just want to put things into  
12 context. This is the open pit. This is where the mine  
13 site would be. This is Nico Lake, Peanut Lake, and  
14 down here Burke Lake. This is Hislop Lake.

15 If we look at water flows, water from  
16 the Marian River goes into Hislop Lake and out at the  
17 bottom down into the Marian River, as you can see in  
18 the animation. The water from our project would --  
19 this is the drainage from Lou Lake. And I'll point out  
20 that there's nothing going into Lou Lake. All we're  
21 using it for is a source of water.

22 Water from the effluent would be  
23 released here at Peanut Lake, and there would be  
24 combining with that through Burke Lake and entering the  
25 Mar -- the Marian River downstream of Hislop Lake. And

1 that's the point we wanted to make, is that it's  
2 downstream of Hislop Lake. So there will be no water  
3 quality changes to Hislop. It's simply downstream of  
4 our project. Thank you.

5 THE CHAIRPERSON: Okay. Thank you.  
6 Get the lights turned back on. Thank you. We'll  
7 continue on the questioning. I'm going to go back to  
8 Dr. Kathy Racher.

9 DR. KATHY RACHER: Kathy Racher, for  
10 the Board. Thank you for your response, John. Just to  
11 clarify then, I -- I think what you said was that  
12 because of -- because you used average concentrations,  
13 which I don't argue with, it just turned out sort of an  
14 artifact of -- of that that it -- it appears as though  
15 the water quality in Marian River is going to be  
16 improved by the -- by the project.

17 But really what you're saying is that  
18 the -- you expect the baseline concentrations and be --  
19 the concentrations in Marian La -- River, sorry, to be  
20 the same before and after the project. Is that  
21 correct?

22 THE CHAIRPERSON: I'll go back to  
23 Fortune Minerals.

24 MR. JOHN FAITHFUL: Mr. Chair, John  
25 Faithful. That's correct, Dr. Racher.

1 THE CHAIRPERSON: Review Board staff,  
2 Dr. Kathy Racher.

3 DR. KATHY RACHER: Kathy Racher, for  
4 the Board. You have given examples of using -- the use  
5 of fertilizer to reduce metal concentrations  
6 potentially in situ in the -- the filled open pit. And  
7 you give examples of -- of this -- of the use of  
8 fertilizer at Colomac Mine and at Grum Pit Lake  
9 (phonetic). And I'm just wondering. The -- I -- I'm  
10 not sure in those examples what metals were targeted  
11 and -- so what the fertilizer really does in terms of -  
12 - are there specific metals that it -- it works better  
13 with than others? So are the case -- are the examples  
14 from Colomac Mine and Grum Pit Lake relevant to the  
15 present case?

16 THE CHAIRPERSON: I'll go to Fortune  
17 Minerals.

18 MR. JOHN FAITHFUL: Mr. Chair, it's  
19 John Faithful. I'm going to ask Ken De Vos, of Golder  
20 Associates, to provide a response to that question.  
21 Thank you.

22 MR. KEN DE VOS: Ken De Vos, with  
23 Golder Associates. In the -- the processes that --  
24 that would be -- would occur upon adding fertilizer to  
25 a pit, really it's the geochemical changes in that pit

1 that would govern the -- the removal of metal. So it's  
2 not the specific metal that it's targeting, it's the  
3 change in geochemistry within the pit.

4 Now, adding fertilizer you would also  
5 promote biological growth and you would have probably  
6 similar microbes to -- to the wetland, except that  
7 would be occurring in the pit itself. And there's been  
8 success at -- at various mines. And I think we list a  
9 few mines there.

10 And there's also a report as well by  
11 LaBerge Environmental Services in March 2010 that lists  
12 some of the different mine sites where this has been  
13 used, and the different metals including zinc, iron as  
14 well. So that -- that reference can be made available  
15 for review as well.

16 THE CHAIRPERSON: Thank you. Review  
17 Board staff...?

18 DR. KATHY RACHER: Kathy Racher for the  
19 Board. Thank you for that. The water quality --  
20 quality modelling, again, from the August 20 memo  
21 assumed a 50 percent reduction in the concentration of  
22 contaminants of concern.

23 I -- I think it was a 50 percent  
24 reduction or to a site-specific water quality objective  
25 level would be achieved by the end of the wetlands.

1 And so this assumption appears to be based on the  
2 expert opinion of your consultants who cite wetlands  
3 constructed in the past at other locations and state  
4 their confidence in the wetlands could -- that could be  
5 built at Nico.

6 So I just wanted to get a sense of how  
7 realistic this assumption is, a 50 percent reduction,  
8 or a reduction down to site-specific water quality  
9 objectives if -- if in fact you've looked at that  
10 specifically.

11 THE CHAIRPERSON: Thank you. Fortune  
12 Minerals...?

13

14 (BRIEF PAUSE)

15

16 MS. MONIQUE HAAKENSEN: Monique  
17 Haakensen, Contango Strategies. Well, first of all,  
18 the 50 percent comes from numbers that we have seen in  
19 the current grid pond system and removal rates in that  
20 system that's naturally happening on site.

21 In addition to that, our experience in  
22 working with these same types of contaminants, we have  
23 removed greater amounts and concentrations of these  
24 contaminants and with better removal efficiencies than  
25 this. So we are confident that we can achieve the

1 site-specific water quality objectives through these  
2 wetlands.

3 THE CHAIRPERSON: Thank you. The  
4 Review Board staff...?

5 DR. KATHY RACHER: Thank you. Kathy  
6 Racher for the Board. I wanted to get a little bit of  
7 a feeling for setting up a wetland, going from the  
8 pilot scale to the -- the real deal on site, and an  
9 idea of what your key uncertainties or -- or obstacles  
10 are to going from -- from the research sort of phase to  
11 the on site, and -- and also an idea of how soon you  
12 know if it's working and if it's going to continue to  
13 work.

14 THE CHAIRPERSON: Thank you. I'll go  
15 to Fortune Minerals.

16

17 (BRIEF PAUSE)

18

19 MS. MONIQUE HAAKENSEN: Monique  
20 Haakensen, Contango Strategies. When we go through the  
21 four (4) phases of the indoor piloting to outdoor  
22 piloting to -- to demonstration scale and then full  
23 scale, we gather information at each stage.

24 And along with each stage we remove  
25 uncertainty. So when we finish the outdoor pilot



1 scales we have enough data there that in the past we  
2 can actually -- we know from -- that from that data we  
3 can actually build a full-scale wetland to the proper  
4 scale and size. We use the demonstration scale to  
5 provide -- to even further reduce any uncertainties and  
6 confirm that everything is operating on site the way we  
7 expect it to from the pilot scales that we have done.

8                   Some of the challenges with that are  
9 just site-specific considerations that happen,  
10 topography -- and these are things that we work with  
11 engineering firms and ensure that everything is laid  
12 out properly.

13                   One (1) of the key things about these  
14 wetlands is that they are custom built. So part of  
15 using the demonstration scale is to just ensure that  
16 the custom built is functioning properly on site and  
17 remove any uncertainty that there is before we go full  
18 scale.

19                   And the timelines, the timelines we do  
20 see the wet -- the wetlands take some time to begin to  
21 -- to grow and function. We plant the plants --  
22 natural local plants into these wetlands and it takes  
23 some time for those plants to begin growing and getting  
24 used to that wetland. We do see removal happening --  
25 removal of the contaminants happening within a matter

1 of months, but we usually give the wetland a year or  
2 two (2) to fully become operational. And we do monitor  
3 the wetland through that initial stage until it's fully  
4 functioning and operational.

5 And for the demonstration scale, that's  
6 where we're going to obtain all the information that we  
7 need for the full scale, to know exactly how long it  
8 takes on site for the wetland to become operational.

9 THE CHAIRPERSON: Thank you. I'm going  
10 to go to YKDF -- sorry, Review Board staff.

11 DR. KATHY RACHER: Kathy Racher for the  
12 Board. You had a question earlier about the volumes of  
13 -- of water and -- and -- that would be generated  
14 onsite, or predicted to be generated onsite, and  
15 whether, you know, wetlands can handle that kind of  
16 volume.

17 And I think the -- the example you gave  
18 was -- you said, I think, 4 million litres per day,  
19 which is -- I did it back of the envelope. I probably  
20 got it wrong, but it seemed to me it was about 150  
21 metres cubed per year, which is -- 150,000, sorry,  
22 metres cubed per year, which is about what you would --  
23 what we -- we might see at Fortune.

24 One (1) of my questions was just about  
25 the size of wetland that you need to -- I -- you know,

1 I believe that you can treat that volume, but the size  
2 of wetland and whether you've looked at the site enough  
3 to know that there's enough room for that potential  
4 size of a wetland to treat that -- that kind of volume.

5 THE CHAIRPERSON: Thank you. Fortune  
6 Minerals...?

7 DR. RICK SCHRYER: Rick Schryer,  
8 Fortune Minerals. I'll answer the first part of the  
9 question, and I'll let Dr. Haakensen answer the second  
10 part.

11 We purposely took Dr. Haakensen and Glen  
12 Koblun to the site yesterday to affirm that they -- the  
13 site conditions were appropriate to build a wetland.  
14 They had a look at the native plants, and they're  
15 comfortable working with the native plants, but also  
16 the location of where these wetlands would be so that  
17 they could feel comfortable that they were -- that  
18 these wetlands could be built in the locations that we  
19 -- we would -- we'd need them to be built. So they  
20 were comfortable with what they saw, and they're  
21 confident that they can proceed as -- as we've said.

22

23 (BRIEF PAUSE)

24

25 DR. MONIQUE HAAKENSEN: Also, based on

1 our experience in wetlands we have designed previously,  
2 over the past thirty (30) years that our team has been  
3 -- oh, I'm sorry. Monique Haakensen, Contango  
4 Strategies. Based on the experience that we've gained,  
5 our -- our team building these, you know, over the past  
6 thirty (30) years, some of the wetlands that we had  
7 originally designed that took up eight (8) acres of  
8 space, we now know we can design them in under four (4)  
9 acres and achieve the same removals with the same  
10 contingencies.

11 So our designs are continuously  
12 improving, and, based on what we have seen on site, we  
13 do believe that we can accommodate the size needed for  
14 these wetlands on the space available.

15 THE CHAIRPERSON: Thank you. I'll go  
16 back to the Review Board staff.

17 DR. KATHY RACHER: Thank you. Just one  
18 (1) more question, Mr. Chair. Kathy Racher for the  
19 Board. I know that you have to start your pilot scales  
20 based -- the indoor and outdoor pilot scale based on  
21 predicted water quality. You're going to start with  
22 the seepage, I understand, from the co-disposal  
23 facility and the predicted water quality.

24 If -- if it turns out those predictions  
25 are not accurate, for whatever reason, can you -- when

1 you get your demonstration scale going, or even your  
2 full scale, can you kind of adjust as you go along and  
3 optimize and change things within the wetland once  
4 you've started it?

5 THE CHAIRPERSON: Thank you. That was  
6 your final question for today, or for this -- okay.  
7 Thank you. I want to continue on to Fortune Minerals.

8 DR. MONIQUE HAAKENSEN: Thank you.  
9 Monique Haakensen with Contango Strategies. One (1) of  
10 the things that we do model with our pilot wetlands is  
11 -- I talked earlier about extreme situations. And in  
12 part of that is actually modelling, or testing I should  
13 say, how these wetlands perform with various different  
14 types of water and different amounts of the different  
15 contaminants.

16 So we will actually be testing various  
17 different extreme potential seepage water qualities  
18 that will go through these wetlands, and see how they  
19 respond to these. And whenever we're designing the  
20 constructive wetlands, we always use numbers that are  
21 worse than the worst-case scenario to make sure that we  
22 have that contingency built in for these types of  
23 errors.

24 There are adjustments that we can make  
25 to the wetlands if we need to, if there is some

1 difference that occurs. It's all the balance between  
2 the plant, the water, and the -- the soil. So if there  
3 is some need for that we can actually make adjustments  
4 to the water depth which actually makes a very big  
5 difference to the types of contaminants we can remove.

6 We can change our hydraulic retention  
7 times so that if there's a higher concentration we have  
8 more time to remove that. And these are things that  
9 can be done on a demonstration scale, or even a full  
10 scale if need be.

11 THE CHAIRPERSON: Okay. Thank you. I  
12 think you want to have a quick response to that.

13 DR. KATHY RACHER: Kathy Racher for  
14 Board. Actually, I -- I just thought I'd follow-up on  
15 Ken De Vos' offer to -- to provide some references on  
16 the in situ treatment at the different mines, just to  
17 make our lives easier, having to look it up. If you  
18 could provide those to the Board that would be helpful.

19 THE CHAIRPERSON: Thank you. I'll go  
20 to Fortune Minerals.

21

22 (BRIEF PAUSE)

23

24 MR. JOHN FAITHFUL: Mr. Chair, John  
25 Faithful. We can provide the references that were --

1 copies of the references that were cited in the closure  
2 memo as per Dr. Racher's request. We'll endeavour to  
3 do that today. At least one (1) of them will be  
4 provided today if -- and the second one by the latest  
5 tomorrow.

6 THE CHAIRPERSON: Mr. John Donihee...?

7 MR. JOHN DONIHEE: Thank you, Mr.  
8 Chairman, it's John Donihee. Yes, we'll -- when --  
9 when they're received we'll simply file them as  
10 exhibits and for -- for purposes of the hearing we'll  
11 number them sequentially and -- and they'll end up on  
12 the record. Thank you.

13 THE CHAIRPERSON: So -- so, John  
14 Faithful, my question to you would be is that you said  
15 you'd have both of them in by tomorrow?

16 MR. JOHN FAITHFUL: Mr. Chair, John  
17 Faithful. Yes, we will have them by tomorrow at the  
18 latest.

19 THE CHAIRPERSON: Thank you. So  
20 there's no need for an undertaking and we'll take that  
21 for tomorrow. Okay. I think that I can close the  
22 questions from staff. I want to go to the Board now.  
23 I want to go to my far left. If there's any questions  
24 from Percy Hardisty, Board member.

25 MR. PERCY HARDISTY: Masi, Mr. Chair.

1 I don't have any questions at this moment.

2 THE CHAIRPERSON: Thank you, Board  
3 member Percy Hardisty. Rachel Crapeau, Board  
4 member...?

5 MS. RACHEL CRAPEAU: I don't have any  
6 questions at the moment. Dr. Racher asked them, so,  
7 thank you.

8 THE CHAIRPERSON: Thank you. Board  
9 member Danny Bayha...?

10 MR. DANNY BAYHA: Thank you, Mr. Chair.  
11 I don't have any questions at this time. Thank you.

12 THE CHAIRPERSON: Thank you. Board  
13 member Richard Mercredi...?

14 MR. RICHARD MERCREDI: No questions at  
15 this time. Thank you, Mr. Chair.

16 THE CHAIRPERSON: Thank you. Board  
17 member James Wah-shee...?

18 MR. JAMES WAH-SHEE: Thank you, Mr.  
19 Chair. I just have a clarification regarding the --  
20 the method of -- of how the wetlands are designed and,  
21 essentially, how it functions.

22 You stated in your presentation that you  
23 had the -- the usage of wetlands in the state of  
24 Alaska, I believe. The wetlands in the state of Alaska  
25 is -- is really dealing with the waste from the



1 military, as I understand.

2 Now, my question is is that have you or  
3 anyone that has been involved in -- in the usage of --  
4 of wetlands in the mining industry, has there been any  
5 of the methods used that you know of? Thank you.

6 THE CHAIRPERSON: I'll go to Fortune  
7 Minerals.

8 MS. MONIQUE HAAKENSEN: Monique  
9 Haakensen, Contango Strategies. The answer is yes.  
10 Actually, our team has built several constructive  
11 wetlands for mining industries including for treatment  
12 of things such as arsenic and selenium.

13 MR. JAMES WAH-SHEE: Mr. Chair, could I  
14 ask you to tell me where are those mines located that  
15 this method was used?

16 THE CHAIRPERSON: Thank you, Mr. Wah-  
17 shee. Fortune Minerals...?

18

19 (BRIEF PAUSE)

20

21 DR. MONIQUE HAAKENSEN: Monique  
22 Haakensen, Contango Strategies. Might I suggest that  
23 we submit a list of mines along with references of  
24 peer-reviewed scientific literature, those being  
25 published, about these constructive wetlands that our

1 team has built in the past. We could submit that  
2 tonight or by tomorrow.

3 MR. JAMES WAH-SHEE: Mr. Chair. But  
4 could you just indicate right now, I mean, were those  
5 mines located in North America, Canada, Mexico, the  
6 state of Alaska?

7 DR. MONIQUE HAAKENSEN: This is Monique  
8 Haakensen, Contango Strategies. Located within North  
9 America. I have to check on the confidentiality of  
10 every single case that we've worked on, so I want to  
11 confirm that before I -- before I say where they are  
12 located, but they are in North America.

13 There are also wetlands functioning in  
14 northern Saskatchewan right now cleaning uranium mining  
15 waste. So this is water coming off of a uranium mine,  
16 cleaning up the waste, including, you know, radioactive  
17 materials, and cleaning that before it goes into the  
18 water. And this is in northern Saskatchewan close to  
19 the Northwest Territories border.

20 THE CHAIRPERSON: Thank you. Mr. Wah-  
21 shee...?

22 MR. JAMES WAH-SHEE: Mr. Chair, thank  
23 you. I guess the -- my reason for asking for  
24 clarification is that you have stated that wetlands  
25 method has been used in a number of cases. But I guess

1 my interests here is that -- that I guess I'm more  
2 interested in the usage of the wetland method  
3 specifically pertaining to mines. But -- because I  
4 understand that the method varies for waste and -- and  
5 also pertaining to the mining industry. So I just want  
6 to thank you very much for the info. Masi.

7 THE CHAIRPERSON: And thank you. Just  
8 so -- for the record, that information is going to be  
9 provided to us by tomorrow as well?

10 DR. MONIQUE HAAKENSEN: Monique  
11 Haakensen, Contango Strategies. Yes.

12 THE CHAIRPERSON: Those information  
13 that you're going to be providing, that's a total of  
14 three (3), and if you have that to us by tomorrow in  
15 Behchoko we'll just pass it on to our staff, and then  
16 we'll make a note of it.

17 Thank you. I'm going to go to Board  
18 member John Curran.

19 MR. JOHN CURRAN: Thank you, Mr.  
20 Chairman. Just one (1) question of clarification  
21 following up on a -- on a question asked by Dr. Racher  
22 regarding the size or the expected size of the  
23 wetlands.

24 You had mentioned in your response that  
25 what you used to do over eight (8) acres you now do

1 over four (4). But those are the only specific sizes  
2 that I heard. Do you have an anticipated size for --  
3 for this project? Thank you.

4 THE CHAIRPERSON: Thank you. Fortune  
5 Minerals...?

6

7 (BRIEF PAUSE)

8

9 DR. MONIQUE HAAKENSEN: Monique  
10 Haakensen, Contango Strategies. Based on the amount of  
11 water that will need to be treated and the  
12 concentrations of the different contaminants that are  
13 predicted to be in that water, we would expect the  
14 wetland to only be a couple acres in size. However, we  
15 need to actually calculate the removal rates to give a  
16 firm answer on that. And that is what the pilot  
17 wetlands are needed for.

18 That being said, having been on site,  
19 there are actually several different places where a  
20 wetland could be built, and each place is of sufficient  
21 size for the full-scale wetland.

22 THE CHAIRPERSON: Thank you. Board  
23 member John Curran...?

24 MR. JOHN CURRAN: Thank you for the  
25 response, and thank you, Mr. Chairman. Nothing further

1 at this time.

2 THE CHAIRPERSON: Okay. Thank you.

3 That concludes this portion of the presentation made by  
4 Fortune Minerals.

5 I want to continue on now. If we could  
6 ask AANDC if they could come up and set up for a quick  
7 presentation, and we'll -- we'll move through the same  
8 rounds of questioning after that.

9

10 (BRIEF PAUSE)

11

12 THE CHAIRPERSON: Okay. It looks like  
13 we're all set up, so we can go ahead and proceed. If  
14 we can just dim the lights a bit. And then just a  
15 reminder, if -- the cell phones, if we could put them  
16 on low or -- so that way we don't have any  
17 interruption. Thank you.

18

19 WATER QUALITY, OPERATIONS, AND CLOSURE PRESENTATION BY  
20 AANDC:

21 MR. ROBERT JENKINS: Good afternoon,  
22 Mr. Chair, Board members, ladies, and gentlemen. My  
23 name's Robert Jenkins, the acting director for  
24 Renewable Resources and Environment with Aboriginal  
25 Affairs, or some like to call us AANDC. I call us A-A-

1 N-D-C.

2 With me today on the panel I have, to my  
3 left, Mr. Nathen Richea with the Water Resource  
4 Division. To his left, I have Mr. Paul Green, also of  
5 the Water Resources Division. Behind me, I have Mr.  
6 Scott Duke. He's our legal counsel. We also have  
7 available Mr. Jason Steele, also our legal counsel.

8 Mr. Chair, we appreciate the opportunity  
9 to present to you today our technical report and our  
10 recommendations on the Fortune Minerals Limited  
11 proposed Nico Project.

12 AANDC's review and technical report  
13 focusses mainly on the water-related aspects of the  
14 proposed project. From our technical review of the  
15 information provided by the Developer, the department  
16 has three (3) main areas of concern, and these include  
17 site-specific water quality objectives -- in short,  
18 SSWQOs -- aquatic effects monitoring, and closure and  
19 reclamation.

20 Mr. Chair, as I'm -- I'm sure you're  
21 aware, AANDC has legislative responsibilities for land  
22 and water management in the Northwest Territories, and  
23 one (1) of these responsibilities is to provide  
24 technical advice to resource management boards to  
25 assist in their decision-making processes.

1 I believe that the recommendations which  
2 the Department will put forward today will be helpful  
3 for the Board in a preparation of a reported  
4 environmental assessment. We request that it's -- that  
5 our recommendations be placed as measures within the  
6 reported EA and implemented moving forward into the  
7 regulatory permitting phase of this project.

8 The first area I'll discuss is in  
9 regards to water quality; more specifically, with  
10 respect to site-specific water quality objectives. As  
11 I mentioned earlier, I'll refer to these as SSWQOs.

12 Aboriginal Affairs believes that SSWQOs  
13 must -- must align with the intended level of  
14 protection for downstream receiving bodies. It is  
15 these downstream environments that are ultimately  
16 affected by the discharge of effluent from a project.

17 In regards to SSWQOs, there are a number  
18 of national and NWT-specific policy documents which  
19 exist that contain statements and concepts relevant to  
20 establish SSWQOs for a project, including the Nico  
21 Project. These documents include the NWT water  
22 stewardship strategy, the Mackenzie Valley Land and  
23 Water Board water and effluent quality management  
24 policy, and documents produced by the Canadian Council  
25 of Ministers of the Environment, otherwise known as the

1 CCME.

2                   These statements are clearly laid out  
3 within our written intervention, and to be conscious of  
4 time today I won't reiterate them all. That said,  
5 there are two (2) statements which really stood out  
6 that I'd like to highlight for the Board.

7                   The first statement was from the NWT  
8 water stewardship strategy, and I quote:

9                   "Residents of the NWT have expressed  
10 a desire to lead in the area of water  
11 stewardship. This means setting high  
12 standards to hold residents and  
13 others responsible and accountable."

14                  The second statement is a guiding  
15 principle of the Mackenzie Valley Land and Water  
16 Board's water and effluent quality management policy.  
17 Again, I quote:

18                  "Pollution prevention: The use of  
19 processes, practices, materials,  
20 products, or energy that avoid or  
21 minimize the creation of pollutants  
22 and waste and reduce overall risk to  
23 human health and the environment."

24                  Aboriginal Affairs feels that these  
25 points really set the general direction for the



1 establishment of SSWQOs for the Nico Project.

2                   Mr. Chair, now that we know the general  
3 direction we want to move in, where should SSWQOs be  
4 applied? And how are they related to end-of-pipe  
5 effluent quality criteria? The schematic on the screen  
6 is intended to illustrate the difference between SSWQOs  
7 and end-of-pipe limits or effluent quality criteria,  
8 commonly referred to as EQCs.

9                   EQCs represent a regulatory limit that  
10 applies at a company's last point of control, which is  
11 typically at the end of the effluent treatment process  
12 prior to discharge. So on this schematic it's here,  
13 before it really enters into the -- the water column.

14                   As mentioned, SSWQOs represent the  
15 desired standard for water, or level of protection that  
16 is to be allotted to the downstream aquatic ecosystem.  
17 SSWQOs can take both quantitative and/or qualitative  
18 forms; for example, numeric concentrations or narrative  
19 statements regarding a level of change.

20                   SSWQOs are typically set for a water  
21 body with the expectation that they will be achieved at  
22 an assessment boundary located at the edge of the  
23 mixing zone, otherwise referred to as an -- an initial  
24 dilution zone. So on this schematic, that would be  
25 sort of out here at the end. See the mixing zone

1 assessment boundary.

2 As illustrated here, EQCs allow for  
3 mixing of the effluent stream with the receiving  
4 environment within the mixing zone in order to bring  
5 the concentration parameters down to SSWQOs at  
6 the edge of that mixing zone.

7 Mr. Chair, Aboriginal Affairs  
8 acknowledges that setting effluent quality criteria is  
9 a regulatory requirement. However, the determin -- the  
10 Department feels that establishing the level of  
11 protection or the standard for water downstream of a  
12 discharge should be determined in the EA phase.  
13 Aboriginal Affairs believes it is this process that  
14 facilitates the assessment of potential adverse effects  
15 from the project from both a social and ecological  
16 context.

17 Our first recommendation related to  
18 site-specific water quality objectives is in regards to  
19 where they should be achieved. And we recommend that  
20 SSWQOs be achieved at the end of a defined mixing zone  
21 within Peanut Lake.

22 Mr. Chair, Fortune has incorporated some  
23 very conservative assumptions into their modelling  
24 predictions of impacts to water quality. The most  
25 conservative assumption is related to high levels of

1 dust and aerial deposition of contaminants to the  
2 aquatic receiving environment.

3                   It appears to the Department that this  
4 assumption is the primary reason for increased water  
5 quality concentrations due to the project, as the  
6 Developer has committed to the use of a reverse osmosis  
7 treatment system capable of producing high-quality  
8 effluent stream.

9                   Subsequently, the Department believes  
10 that the conservative assumptions regarding dust inputs  
11 was a contributing factor for the Developer's proposed  
12 use of SSWQOs based mainly upon a review of available  
13 toxicity literature.

14                   Fortune's rationale for including these  
15 highly conservative assumptions is that there are no  
16 defensible values which could be applied that would  
17 represent the expected reductions -- reduction in  
18 loadings from dust suppression.

19                   However, experience at other mines, such  
20 as the Ekati Mine, suggest that while a potential  
21 issue, the environmental impacts of dusting on the  
22 aquatic receiving environment can be mitigated to a  
23 large extent through the implementation of dust-  
24 management strategies.

25                   Accounting for -- on mitigated dust

1 loadings during the derivation of SSWQOs is not  
2 appropriate and, we feel, is overly conservative. And  
3 proposing the use of such values goes against the  
4 pollution prevention principle.

5                   The Departments notes that Fortune has  
6 committed to the implementing dust-suppression  
7 strategies for their project. Thus, more realistic  
8 modelling is possible at a later date and during  
9 initial project operation.

10                   Aboriginal Affairs agrees with  
11 Environment Canada and the Proponent that the SSWQOs  
12 previously put forward by the Proponent should not be  
13 used as a basis for assessing receiving water impacts  
14 nor for developing effluent quality criteria.

15                   The department maintains that derivation  
16 of SSWQOs must consider the current and the intended  
17 use of the downstream environment. Accordingly, SSWQOs  
18 must consider a number of factors, including use of the  
19 aquatic ecosystem, existing background concentrations,  
20 or objectives that may be reasonably achieved through  
21 the use of best-management practices and effluent  
22 treatment technologies.

23                   It is the understanding of Aboriginal  
24 Affairs that the Tlicho people actively use the area  
25 downstream of the Nico Project for traditional

1 activities, including fishing, harvesting, and  
2 residency and that the Marian River system and the  
3 Burke Lake watershed have a particular cultural value.  
4 It is important that SSWQOs derived for the Nico  
5 Project protect these specific uses and do not preclude  
6 new uses now or into the future.

7                   Mr. Chair, Aboriginal Affairs provides  
8 the following recommendation to guide development of  
9 acceptable SSWQOs for all contaminants, potential  
10 concern, for the Nico Project.

11                   We recommend that final SSWQOs are based  
12 upon the use of the downstream aquatic environment now  
13 and into the future -- now and into the future. This  
14 could be achieved through consideration of natural  
15 background concentrations; existing human use of the  
16 water, such as for drinking or fishing;  
17 assimilation/mixing capacity; long-term chronic  
18 toxicity exposure in the receiving environment; single-  
19 and joint-action toxicity of analytes being released;  
20 degradation, transport, and sequestration mechanisms;  
21 chemical characteristics that modify toxicity, such as  
22 hardness, pH, organic matter; and protecting ecosystem  
23 diversity, which will provide protection for critical  
24 species, such as ecological keystone species.

25                   Aboriginal Affairs submits that a

1 stepwise process may assist in moving forward towards  
2 the final derivation of SSWQOs for the Nico Project.  
3 In line with the general statements for water  
4 protection, pollution prevention, and use of best-  
5 management practices I've previously discussed, such a  
6 process would include the following steps in order of  
7 preference.

8                   Step 1: Practically achievable  
9 concentrations in the receiving environment as a result  
10 of source control and/or treatment; in other words,  
11 best-management practices.

12                   Step 2: Required CCME water quality  
13 guideline protection of aquatic life or existing  
14 background concentrations if they can be reasonably  
15 achieved.

16                   Step 3: For parameters that currently  
17 exceed, or are predicted to exceed, CCME aquatic life  
18 guidelines, CCME derivation processes, such as toxicity  
19 modifications.

20                   Step 4: For remaining parameters,  
21 review available toxicity literature or developing new  
22 toxilological information to determine concentrations.

23                   And the last step, if needed:  
24 Conducting ecological risk assessments of the predicted  
25 concentrations to determine if the level of impact

1 associated with the contaminants are acceptable to  
2 stakeholders.

3                   So our specific recommendation is that  
4 SSWQOs derived for the Nico Project should, as a first  
5 step, consider practically achievable concentrations  
6 demonstrated for the RO treatment system, existing  
7 background concentrations, as well as available CCME  
8 guidelines for the protection of aquatic life.

9                   Following this, derivation of SSWQOs  
10 from reviewing available toxicity literature and/or  
11 developing new toxilogical information, conducting of  
12 ecological risk assessments, et cetera, could be  
13 considered.

14                   Mr. Chair, at this time, the Department  
15 is sceptical that acceptable and numerical values for  
16 SSWQOs for the Nico Project will be determined prior to  
17 closure of the public record.

18                   But in their absence, we feel that as a  
19 minimum requirement, narrative statements regarding the  
20 level of protection for water downstream of the Nico  
21 Project during operations and closure should be  
22 included as a measure within the report of the  
23 environmental assessment.

24                   These narrative statements would  
25 represent qualitative objectives and would guide the

1 development of numerical objectives that provide the  
2 accepted level of protection and the standard for  
3 downstream waters.

4 To this end we recommend that the  
5 reported EA include narrative statements, again,  
6 specifically to describe the level of protection  
7 afforded to the downstream aquatic receiving  
8 environment downstream of the initial dilution zone.

9 The statements that we -- that we feel  
10 are appropriate include: Water quality changes due to  
11 mining activities will not significantly affect benthic  
12 macro-invertebrate and plankton abundance, taxonomic  
13 richness, or diversity.

14 Water quality changes due to mining  
15 activities will not significantly alter fish abundance  
16 or diversity, or fish consumption at current levels.

17 Water quality changes due to mining  
18 activities will not negatively affect areas utilized as  
19 traditional drinking water sources. Water quality  
20 changes due to mining activities will not significantly  
21 affect mammals or water -- wildfowl using the area as a  
22 drinking water, food source, or habitat, or the current  
23 ability for people to harvest these animals. And water  
24 quality in the Marian River remains unchanged.

25 In regards to that statement, the -- the



1 Developer had mentioned this morning that they would  
2 prefer the wording of "substantially unaltered". And  
3 the Department is -- is okay with that -- with that  
4 change. We view -- we view "unchanged" and  
5 "substantially unaltered" in the same -- same light.  
6 So we would be acceptable with that wording change.

7                   We'd like to highlight, Mr. Chair, that  
8 following release of the Tlicho Traditional Knowledge  
9 Study, the Department will review these recommendations  
10 and will modify, if necessary, and we'll provide that  
11 within our closing written statement to the Board.

12                   So next I will discuss aquatic effects  
13 monitoring of the project. The Developer has initiated  
14 discussions and has begun developing an aquatic effects  
15 monitoring program, otherwise known as an AEMP.  
16 However, the program focuses on the design and  
17 implementation requirements of the metal mining  
18 effluent regulations. Fortune has indicated that they  
19 will only consider the guidelines prepared by  
20 Aboriginal Affairs for AEMP development.

21                   Regarding the development of an AEMP, we  
22 believe that -- that our 2009 AEMP guidelines provide a  
23 solid basis for first identifying potential effects,  
24 and then monitoring project-related effects to the  
25 downstream receiving environment. This concept is

1 critical to the AEMP design and should be directly  
2 related to effects assessments conducted in the  
3 environmental assessment.

4                   Of equal importance, as outlined within  
5 our guidelines, the aquatic effects monitoring program  
6 provides a mechanism for incorporating traditional  
7 knowledge in an efficient and effective manner, and  
8 harmonizing the requirements for aquatic effects  
9 monitoring with other requirements, such as the  
10 environmental effects monitoring program under the  
11 metal mining effluent regulations.

12                   Mr. Chair, Aboriginal Affairs'  
13 guidelines define an eight (8) step process for  
14 designing and conducting monitoring. We refer to this  
15 as the AEMP framework. That framework is purposely  
16 designed such that the initial steps can begin in the  
17 EA phase. Later steps considered include mechanisms to  
18 trigger adaptive management, or management response  
19 actions, in the event that a project is causing an  
20 unaccepted level of change or impacts to the downstream  
21 environment.

22                   These are critical components that are  
23 unique to Northern aquatic effects monitoring programs.  
24 We feel that our guidelines and the framework within it  
25 should be followed during the development of Fortune's

1 final AEMP for the Nico Project, to ensure that the  
2 AEMP incorporates traditional knowledge and the concept  
3 of adaptive management in its design.

4 So our recommendation is that Fortune  
5 Minerals follow our guidelines for developing an AEMP  
6 and within that the -- the -- their aquatic effects  
7 monitoring program should identify action levels and  
8 related management response framework for this project.

9

10 (BRIEF PAUSE)

11

12 MR. ROBERT JENKINS: Our last topic is  
13 related to closure and reclamation. I know that  
14 tomorrow we're also going to speak to this, but we had  
15 talked to staff previously that we would discuss this,  
16 because it relates to -- to water.

17 The Department has developed a mine-site  
18 reclamation policy for the NWT in response to a number  
19 of instances where the Crown has assumed environmental  
20 liabilities of sites due to insolvency and subsequent  
21 abandonment of a mining property.

22 Principles of that policy identify a  
23 mine-site reclamation to reflect the collective desire  
24 and commitment to operate under the principles of  
25 sustainable development, including the polluter pays

1 principle, and that every new mining operation should  
2 be able to support the costs of reclamation.

3               The Department developed this policy to  
4 ensure protection of the environment and for the  
5 disposition of liability related to mine closures in  
6 the NWT. As such, reclamation security must equal the  
7 total outstanding liability of the mine development.  
8 It is understood, as is the case with other operations  
9 in the NWT, that the cost of reclamation may  
10 progressively increase with each stage of mine  
11 development.

12              Following the release of the policy in  
13 2002, we developed guidelines, mine-site reclamation  
14 guidelines. A key concept in those guidelines is to  
15 design for closure and reclamation. And the goal here  
16 is to minimize long-term care and maintenance, and to  
17 eliminate care requirements post-closure.

18              Determining walkaway scenarios with  
19 minimal maintenance post-reclamation is particularly  
20 important to the NWT -- or, particularly important in  
21 the NWT due to the isolated location of -- of the  
22 majority of -- of sites.

23              The Department has two (2) primary  
24 concerns with the closure scenario for the proposed  
25 Nico Project. One (1) is the length of time required

1 for the pit to fill naturally, and the need for passive  
2 or active water treatment post-closure.

3                   There were two (2) scenarios previously  
4 presented in regards to the open pit. One (1) was  
5 allowing it to fill naturally over a hundred and twenty  
6 (120) years, and one (1) was to actively fill it over  
7 about ten (10) years through pumping water from the  
8 Marian River.

9                   We now understand that the Company is  
10 committed to actively filling the pit upon closure, and  
11 -- and we strongly agree with that. We prefer to see  
12 the pit filled actively over a period of -- of ten (10)  
13 -- I believe ten (10) to fourteen (14) years is what  
14 they're proposing, as long as this schedule does not  
15 significantly impact the water qua -- quantity of the  
16 local system - namely, the Marian River.

17                   The Department believes that this is a  
18 more manageable option from a mine closure perspective,  
19 and it ensures that the Proponent addresses outstanding  
20 liabilities as soon as possible. Our position is to  
21 eliminate the risk and long-term liability as soon as  
22 possible following the end of mining operations.

23

24 (BRIEF PAUSE)

25

1 MR. ROBERT JENKINS: So, Mr. Chair,  
2 again, while the Department is pleased that Fortune is  
3 committed to actively filling the pit, uncertainty  
4 remains regarding the long-term quality of water that  
5 will need to be managed on the site.

6 Fortune has proposed constructed  
7 wetlands as a potential walkaway solution to the  
8 management of long-term water quality issues and has  
9 identified a series of studies and work that will be  
10 required to confirm the suitability of this option.

11 The Department agrees that additional  
12 effort is required to develop closure options that will  
13 eliminate the need for long-term treatment and  
14 associated care and maintenance. This work should  
15 occur early in the closure planning process to allow  
16 for any potential adjustments to the proposed strategy.

17 So our recommendations in this regard  
18 are that, again, we recommend that the pit be actively  
19 filled, but we do not want the water quantity of the  
20 Marian River to be impacted in a negative sense. So  
21 the timing could -- could adjust slightly.

22 We feel that that is the -- should be  
23 the preferred closure scenario for the project, and  
24 this is unless additional information collected during  
25 the operations phase determines that -- that something

1 -- something better exists, from an environmental point  
2 of view.

3                   We also recommend that a key element of  
4 the closure planning process during operations should  
5 be to identify and develop methods to eliminate the  
6 need for passive or active long-term treatment water  
7 leaving the site.

8                   Mr. Chair, Fortune Minerals Limited is  
9 proposing the development of a cobalt, gold, copper,  
10 and bismuth mine located in the Tlicho region of the  
11 Northwest Territories.

12                   The location of the project is within an  
13 area currently used by the Tlicho people for  
14 traditional activities. Any effects of the proposed  
15 project should be limited such that they do not impact  
16 or limit usage of this area by the Tlicho now and into  
17 the future.

18                   Specifically, Aboriginal Affairs  
19 understands that the Marian River is of particular  
20 importance and warrants protection to a high level of  
21 confidence. In addition, the Department now  
22 understands that Burke Lake is also an area of ongoing  
23 traditional use.

24                   Where possible, Aboriginal Affairs has  
25 provided recommendations to the Review Board to assist

1 in their decision-making process to minimize the  
2 potential impacts of this project in both magnitude and  
3 temporal extent.

4 We have provided recommendations  
5 regarding site-specific water quality objectives to  
6 help minimize the potential effects to water quality  
7 and provide a higher level of confidence that the  
8 downstream aquatic ecosystem will see minimal impacts.

9 We provided recommendations regarding  
10 closure and reclamation of the mine and the pit to  
11 reduce the overall closure time frame which will reduce  
12 the period during which use of the area is altered.  
13 These recommendations support the goal of minimizing  
14 impacts to traditional use of the area.

15 Again, the Department notes that  
16 following the submission of the Tlicho Traditional  
17 Knowledge Study report, the Department will review its  
18 recommendations and include any necessary modifications  
19 in our closing statements.

20 So with that, Mr. Chair, I'd like to  
21 thank you again for the opportunity to speak and  
22 present our recommendations. That concludes our  
23 presentation, and we are open for questions from  
24 parties.

25



1 QUESTION PERIOD:

2 THE CHAIRPERSON: Thank you. You  
3 can turn on the lights. Thank you, Mr. Jenkins from  
4 AANDC, for your presentation. We'll go into questions  
5 now. I'm going to go to -- how about I start from the  
6 bottom this time. I'm going to go to Natural Resources  
7 Canada.

8 Is there any questions for AANDC on  
9 their presentation?

10 MR. JOHN KING: John King, Natural  
11 Resources Canada. We have no questions for AANDC.  
12 Thank you.

13 THE CHAIRPERSON: Thank you. I'm going  
14 to go to Transport Canada.

15 MR. DALE KIRKLAND: Dale Kirkland,  
16 Transport Canada. No questions, Mr. Chair.

17 THE CHAIRPERSON: Thank you.  
18 Environment Canada...?

19 MR. CAREY OGILVIE: Carey Og -- Carey  
20 Ogilvie, Environment Canada. No questions. Thank you,  
21 Mr. Chair.

22 THE CHAIRPERSON: Thank you. I'm going  
23 to go to the Government of Northwest Territories.

24 MS. LORETTA RANSOM: Loretta Ransom  
25 with the Government of the Northwest Territories. We

1 have no questions. Thank you.

2 THE CHAIRPERSON: Thank you. Fisheries  
3 and Oceans in Canada...?

4 MS. SARAH OLIVIER: Sarah Olivier with  
5 Fisheries and Oceans. We have no questions for AANDC.  
6 Thanks.

7 THE CHAIRPERSON: Thank you. I'm going  
8 to go to the North Slave Metis Alliance.

9 MR. BILL ENGE: Thank you, Mr.  
10 Chairman. Yikes. I don't know if that's auspicious or  
11 not. But in any case, I have a question for AANDC, as  
12 it's now being called.

13 Is AANDC aware that the North Slave  
14 Metis people consider the area where the Nico Mine  
15 Project is located to be part of their traditional  
16 lands?

17 THE CHAIRPERSON: Thank you. I'm going  
18 to go to AANDC.

19 MR. ROBERT JENKINS: Thank you, Mr.  
20 Chair. It's Robert Jenkins with Aboriginal Affairs.  
21 Yes, we are aware of that. And you've reaffirmed it  
22 then.

23 THE CHAIRPERSON: Thank you. North  
24 Slave Metis Alliance...?

25 MR. BILL ENGE: Yes. Thank you, Mr.

1 Chairman. Bill Enge, North Slave Metis Alliance. Yes,  
2 then I think it would be only right and proper and  
3 respectful of AANDC, that's supposed to be representing  
4 the Crown, to respect the fact that the -- this is part  
5 of the North Slave Metis people's traditional lands and  
6 to put that up on their PowerPoint presentation the  
7 next time they come here and point out which Aboriginal  
8 peoples have claims to those lands. Thank you.

9 THE CHAIRPERSON: Okay, thank you. Is  
10 there any further questions from the North Slave Metis  
11 Alliance on the presentation made?

12 MR. BILL ENGE: Bill Enge here. Thank  
13 you, Mr. Chairman. No, I -- I think that that is  
14 sufficient for now. Thank you.

15 THE CHAIRPERSON: Okay. Thank you.  
16 I'm going to continue on. I'm going to go to the  
17 Akaitcho IMA Office if there's anybody here. I don't  
18 see anybody here. I'm going to continue on to the  
19 Yellowknives Dene First Nation, questions for the --  
20 AANDC on the presentation?

21 MR. TODD SLACK: Thanks, Mr. Chair.  
22 Todd Slack, YKDFN. Given the -- or, sorry, I have one  
23 (1) question. Given the additional information that's  
24 been filed with the registry, is AANDC comfortable with  
25 the amount of costing information that exists and the

1 risk of perpetual treatment after closure?

2 THE CHAIRPERSON: Thank you for your  
3 question. I'm going to go to AANDC. Mr. Jenkins...?

4

5 (BRIEF PAUSE)

6

7 MR. ROBERT JENKINS: Thank you, Mr.  
8 Chair. It's Robert Jenkins, Aboriginal Affairs. We  
9 haven't done a full review of some of that information,  
10 so we're going to be going through that and reviewing  
11 that in advance of final written submissions.

12 That said, a lot of the questions on  
13 costing and reclamation security and these types of  
14 things are included when we move to the regulatory  
15 phase of the project. The -- in this case, the  
16 Wek'eezhi Land and Water Board would be required to  
17 establish a reclamation security amount.

18 So I think there's a lot of discussion  
19 that needs to take place yet on that -- on that issue.

20 THE CHAIRPERSON: Okay, thank you. I'm  
21 going to go to YKDFN if there's any -- that was your  
22 final question? Thank you. I'm going to go to the  
23 Tlicho Government. Questions for AANDC on their  
24 presentation?

25 DR. GINGER GIBSON: Masi, Mr. Chair.

1 Ginger Gibson, with the Tlicho Government. Thank you  
2 for your presentation. Mr. Jenkins, do you -- can you  
3 please address the following question?

4                   What do the reclamation guidelines that  
5 you mentioned -- what do they suggest when there is  
6 substa -- substantial uncertainty on what the final  
7 values will be for things like seepage, water quality,  
8 or for pit water quality or for the issue of -- if  
9 there does need to be active treatment of water in the  
10 long-term, what kinds of guidance -- what kind of  
11 guidance is there from the reclamation guidelines to --  
12 when there is proven substantial uncertainty? Masi.

13                   THE CHAIRPERSON: Okay, thank you. I'm  
14 going to go to AANDC.

15                   MR. ROBERT JENKINS: Thank you, Mr.  
16 Chair. It's Robert Jenkins, Aboriginal Affairs. The  
17 guidelines sort of lay out information requirements  
18 which would be good in developing mine closure plans.  
19 So it talks about advancing knowledge through time,  
20 looking at things like a preliminary or a conceptual  
21 plan moving into, later in the mine life, an interim  
22 plan, and moving into a final plan.

23                   So what we would hope is that any  
24 uncertainty that we might see in regards to a closure  
25 scenario or a closure option early on would be refined

1 and -- and eliminated through time.

2                   The other thing that, as far as I  
3 understand, the guidelines discuss are in relation to  
4 alternatives. So -- and to defining potentially other  
5 closure options, so that if one (1) were to be found  
6 that it's not the -- the most optimal option, there are  
7 alternatives which could be fleshed out.

8                   THE CHAIRPERSON: Thank you. And we'll  
9 go back to the Tlicho Government.

10                  DR. GINGER GIBSON: Masi for your  
11 answer. Do the guidelines also identify best practices  
12 for including community Aboriginal governments in  
13 independent monitoring for verification purposes, or  
14 for reporting, or for communication downstream of the  
15 project?

16                  THE CHAIRPERSON: Thank you. We'll go  
17 back to AANDC.

18                  MR. ROBERT JENKINS: It's Robert  
19 Jenkins with Aboriginal Affairs. The guidelines the --  
20 that were developed by INAC at the time, now AANDC,  
21 were more focussed on the technical requirements. So  
22 they were more focussed on what we would like to see in  
23 a plan, what -- you know, the level of detail, really  
24 focussed more on the technical.

25                  And there are guidelines which are being

1 developed jointly between AANDC and the Boards on  
2 closure which discuss a lot more of these sort of  
3 Board-related requirements and things like that. I  
4 don't know off the top of my head, I don't believe that  
5 they discuss independent monitoring, because they are  
6 tailored, again, towards the Board process.

7 THE CHAIRPERSON: Thank you. We're  
8 going to go back to the Tlicho Government.

9 DR. GINGER GIBSON: Masi, Mr. Jenkins.  
10 In the -- in your answer to question 1, you suggested  
11 that there are alternatives when -- when there's  
12 substantial uncertainty, that alternatives are  
13 identified to other options. As you know, the Tlicho  
14 Government has asked for active treatment to be costed  
15 and identified as a long-term option to see what --  
16 what that reality would look like.

17 What, in AANDC's opinion -- do you  
18 consider this to be a -- a -- an alternative that  
19 continues to need consideration? And do you see  
20 remaining uncertainties in the long-term active water  
21 treatment -- or, in the long-term water treatment plan?  
22 Masi.

23 THE CHAIRPERSON: Thank you. Fortune  
24 Minerals...?

25

1 (BRIEF PAUSE)

2 THE CHAIRPERSON: Sorry, AANDC?

3

4 (BRIEF PAUSE)

5

6 MR. ROBERT JENKINS: It's Robert  
7 Jenkins with Aboriginal Affairs. Could I ask you to  
8 repeat that question again, just so we are clear on  
9 what you're asking?

10 DR. GINGER GIBSON: Thank you. Do you  
11 see remaining uncertainties with the treatment plans,  
12 the water treatment plans, that have been identified?  
13 You suggest that when there is uncertainty, all  
14 alternatives should be identified. If there is  
15 uncertainty with a particular option, that all the  
16 other uncertainties should be identified and -- and  
17 understood. Masi.

18 THE CHAIRPERSON: AANDC...?

19 MR. ROBERT JENKINS: It's Robert  
20 Jenkins with Aboriginal Affairs. Thank you for that.  
21 I think that there's been a lot more information  
22 provided just recently on just some of the -- you know,  
23 whether or not active and/or to the level or the extent  
24 that passive treatment will be required post-closure.  
25 So I can't say that we've done a full and thorough



1 evaluation of all of that yet.

2 I do think that there still needs to be  
3 some work done. So I think at this point in time, one  
4 (1) of the things that the company has committed to is  
5 implementing a lot of testing, a lot of studies, to  
6 confirm the viability of some of these options.

7 And -- and we see this with -- with many  
8 mine sites. We see a mine start operations, work  
9 towards closure. And one (1) of the things that --  
10 that is key in our guidance documents is designing for  
11 closure. So we put a really strong urge on starting  
12 early to -- to figure these things out.

13 So we see in a lot of instances  
14 companies doing what's -- what's known as "reclamation  
15 research" to refine a lot of these things. So I don't  
16 think that I could say right now that the Company has  
17 absolved a 100 percent all of the uncertainty, but I  
18 think that they put forward commitments to addressing  
19 these things.

20 And the key is to addressing them early  
21 on in the mine life so that there's time to implement  
22 either adjustments to their proposed plan or to  
23 implement a different strategy altogether.

24 THE CHAIRPERSON: Okay, thank you.  
25 We'll go to the Tlicho Government.

1 DR. GINGER GIBSON: Thank you. Unless  
2 anyone else in our party has comments, those are our  
3 com -- our questions for now. Masi cho.

4 THE CHAIRPERSON: Thank you. I'm going  
5 to go to Fortune Minerals now, if there's any questions  
6 for AANDC and the presentation.

7 DR. RICK SCHRYER: Rick Schryer,  
8 Fortune Minerals. I don't have any questions; I'd just  
9 like to make a couple of comments to clarify some of  
10 the things that were said.

11 In terms of the aquatic effects  
12 monitoring program, Fortune Minerals already has an  
13 aquatic effect -- or, an AEMP working group in place.  
14 We've already met a couple of times; it was a while  
15 ago.

16 We actually tried to have a meeting  
17 before these hearings, but nobody was available. But  
18 there already is a working group in place that would  
19 involve Aboriginal Affairs, Environment Canada, the  
20 Tlicho Government, in working towards a -- the  
21 development of the aquatic effects monitoring plan. So  
22 just to give you an idea of that.

23 In relation to the Marian River and its  
24 pumping rates, we were very conservative in our  
25 estimation of how long it would take to fill the open

1 pit. And to be protective of the Marian River, we used  
2 a very low pumping rate to make sure that, you know,  
3 the -- we wouldn't cause an effect in the Marian River  
4 by pumping the open pit.

5 So that's a -- we could pump it faster,  
6 but you wouldn't want to, right. So that's why it  
7 takes twelve (12) years to get there.

8 Final comment I'd like to make is in  
9 relation to what Dr. Gibson said concerning potential  
10 monitoring. In our technical meetings in February, I  
11 did mention that we were having initial discussions  
12 with the Wek'eezhii Land and Water Board concerning a  
13 Marian River watershed monitoring program. This would  
14 be a community-based monitoring program that would look  
15 at the watershed as a whole. And Fortune Minerals  
16 would be interested, as we made the commitment in  
17 February, to participate in that monitoring program.  
18 Thank you.

19 THE CHAIRPERSON: Thank you. Next I  
20 have is the Review Board staff. I'm going to turn it  
21 over to them and then the Board Members.

22 DR. KATHY RACHER: Kathy Racher, thank  
23 you. In your technical report you discuss the  
24 potential impacts of dust and your opinion that the  
25 estimates of the effect of dust are -- are pretty

1 conservative. Nonetheless, you note that Fortune's  
2 already committed to implementing dust suppression  
3 strategies for their project.

4 And I'm just wondering if you would  
5 recommend some kind of dust mitigation plan or  
6 monitoring for the project going forward to keep an eye  
7 on potential effects.

8 THE CHAIRPERSON: Thank you. I'm going  
9 to go to AANDC.

10

11 (BRIEF PAUSE)

12

13 MR. ROBERT JENKINS: Thank you, Mr.  
14 Chair. It's Robert Jenkins with Aboriginal Affairs.  
15 Yeah, we would feel that it would probably be a good  
16 idea to do some pilot testing of different dust  
17 suppression techniques. We do know that some of the  
18 mines have implement different -- different things  
19 which they may put on the roads or -- or -- or things  
20 like that which suppress dust.

21 So, yes, we would -- we would think that  
22 it's probably a good idea to do that and then, you  
23 know, try to, in your monitoring, to quantify what  
24 might be coming into the system through -- through dust  
25 or aerial -- aerial deposition.

1 THE CHAIRPERSON: Thank you. I'll go  
2 to the Review Board staff.

3 DR. KATHY RACHER: Thank you. Kathy  
4 Racher for the Board. Your recommendation on the  
5 narrative statements to describe the level of  
6 protection afforded to the receiving environment were  
7 quite interesting. And I -- but I just have a couple  
8 of questions of clarification on these statements.

9 In three (3) of the statements you used  
10 the term, "will not significantly affect or alter  
11 certain metrics of aquatic species and other wildlife."  
12 And I -- I guess I'm looking for a little clarification  
13 on what -- what you mean by "significance".

14 Is it a statistical significance, or is  
15 it some sort of qualitative significance? It's on page  
16 10 of your technical report.

17 THE CHAIRPERSON: Thank you. We'll go  
18 to AANDC.

19

20 (BRIEF PAUSE)

21

22 MR. ROBERT JENKINS: Yeah, I think --  
23 sorry, Mr. Chair. It's Robert Jenkins with Aboriginal  
24 Affairs again. Yeah, we do say, "significantly," in  
25 fact, and -- and, depending on who you talk to, that

1 has a bit of a different meaning.

2 If you talk to a man who generally shows  
3 up to these hearings with us, Mr. Barry Zadjlik, it has  
4 a statistical meaning. But what we would like to do,  
5 moving forward, is that you had to have a balance of  
6 the science and -- and obviously the -- the social and  
7 the traditional knowledge aspect.

8 So you would -- you would want to look  
9 at what is significance and what does it mean and then  
10 taking that from people and the users of the system and  
11 translating that and -- then into some sort of  
12 quantitative metric. So how do you measure that? So  
13 what does significantly affect, you know, benthic  
14 macro-invertebrates mean?

15 Well, it depends then on use of the  
16 system, what fish are being used, what are the keystone  
17 species. And then you really need to go down and say,  
18 Okay, well, what -- what bugs do those fish eat? So  
19 you need to relate all these things, but it's a bit of  
20 a combination between science and -- and sort of people  
21 and the use of the area.

22 THE CHAIRPERSON: Thank you. We'll go  
23 to Review Board staff.

24 DR. KATHY RACHER: Kathy Racher for the  
25 Board. Okay. So you're basically saying it's -- you

1 don't have an exact definition for "significance", but  
2 it might be informed by, for example, the TK Study or -  
3 - or the values of the -- of the people.

4 So you don't -- but you don't have a  
5 specific thing that you mean or certain benchmark or  
6 percentage or anything like that at -- at this time?

7 THE CHAIRPERSON: Thank you. AANDC...?

8

9 (BRIEF PAUSE)

10

11 MR. ROBERT JENKINS: Thank you, Mr.  
12 Chair. It's Robert Jenkins with Aboriginal Affairs  
13 again. We do sort of lay out in some of our statements  
14 sort of, you know, current levels, things like that.  
15 So there's statistical methods to look at that. Do you  
16 do standard deviations or things like that?

17 So the other one that we discussed  
18 earlier, and the Proponent highlighted as well, is the  
19 -- we put forward water quality in the Marian River to  
20 be unchanged, and they said "substantially unaltered".  
21 So that could be, you know, looked at in the sense of  
22 is that within the normal range of -- of natural  
23 variability, things like that.

24 So there's some other points that we've  
25 listed which obviously we are not the -- the best

1 people to define; you know, where are the traditional  
2 drinking water areas and these sort of things. So  
3 that's why we mentioned previously that we would be  
4 looking closely at the report, which is forthcoming, to  
5 see if we need to alter some of these statements.

6 THE CHAIRPERSON: Thank you. I'll go  
7 back to the staff, Review Board staff.

8 DR. KATHY RACHER: Kathy Racher for the  
9 Board. Okay. The -- the statement about:

10 "Water quality changes due to mining  
11 activities will not negatively affect  
12 areas utilized as traditional  
13 drinking-water sources."

14 Wouldn't an appropriate benchmark for  
15 "negatively affected" be drinking-water guidelines, or  
16 are there other factors that might be involved in  
17 making that statement true?

18 THE CHAIRPERSON: Thank you. AANDC...?

19 MR. ROBERT JENKINS: It's Robert  
20 Jenkins, Aboriginal Affairs. I mean, yeah, that's a  
21 national guideline that could be applied. I think  
22 you'd want to look at the amount of -- the loadings of  
23 materials entering into the system as well. But -- but  
24 I think that, as a -- sort of a rule of thumb, you  
25 would look at that national standard for drinking-water



1 quality, you know, at that -- when you do that  
2 assessment.

3 THE CHAIRPERSON: Thank you. I'm  
4 going to go back to the Review Board staff.

5 DR. KATHY RACHER: Kathy Racher, for  
6 the Board. Just one (1) last question, really a -- a  
7 clarification. We've -- we're talking about the one  
8 (1) -- about the Marian River, the water quality in  
9 Marian River remains unchanged.

10 And -- and when I first read that I  
11 wondered if it was changed in the sense of uses of  
12 water or changed in the absolute concentration, because  
13 you're a chemist; you might think of milligrams per  
14 litre. And you brought up that substantially unaltered  
15 also worked for you.

16 And does that mean sort of within the  
17 range of natural variation? Is that what you would  
18 consider substantially unaltered?

19 THE CHAIRPERSON: Thank you. I'll go  
20 back to AANDC.

21 MR. ROBERT JENKINS: Thank you, Mr.  
22 Chair, it's Robert Jenkins with Aboriginal Affairs. I  
23 think, yes, if you're looking from a sort of water  
24 quality concentration point of view that you'd be  
25 looking at -- within the range of natural variability.

1                   Now again, talking to the -- the guys  
2 who do the stats and the -- the tables, there's several  
3 different ways to go about that. But I think that in  
4 essence, yes, that's what we're looking for.

5                   THE CHAIRPERSON:       That's it? That's  
6 your final question? Mr. Donihee...?

7                   MR. JOHN DONIHEE:     Thank you, Mr.  
8 Chairman, John Donihee. Mr. Jenkins, this morning in -  
9 - in answer to a question from Dr. Racher, Fortune  
10 Minerals explained the way that they were proposing  
11 that site-specific water quality objectives apply to  
12 Peanut Lake as a whole.

13                   And in your presentation you're  
14 suggesting that these objectives ought to be met at the  
15 edge of the mixing zone. If you were here, you heard  
16 the answer that was given this morning, I'm -- I'm  
17 sure.

18                   I'm just wondering if you can comment on  
19 this discrepancy between, you know, where the  
20 objectives -- the -- the two (2) parties are suggesting  
21 the objectives ought to apply and try to tell the Board  
22 what -- what difference that makes, given the answer we  
23 heard this morning about it -- it being such a small  
24 lake.

25                   THE CHAIRPERSON:       Thank you, Mr.

1 Donihee. I'll go back to AANDC.

2

3 (BRIEF PAUSE)

4

5 MR. ROBERT JENKINS: Thank you, Mr.

6 Chair. It's Robert Jenkins, Aboriginal Affairs. If

7 you were to look at national guidance on -- on mixing

8 zones, they often talk about -- they -- they put in

9 several different calculations. And some talk about --

10 well, they -- they sort of all mention that you should

11 keep the zone as small as possible.

12 When we put in our recommendation we had

13 seen that the Proponent had put in a document back in

14 May of 2011, Appendix 7-4, and they talked about the

15 diffuser. And the diffuser obviously is the discharge

16 mechanism, and it plays a very key role in the mixing

17 of the effluent.

18 In that -- in that document it talked

19 about that the -- the mixing zone would be one-third

20 (1/3) the width of the lake. So I think that there's a

21 bit of a shift there talking about seasonal variations

22 in water volumes, which we agree will alter the mixing

23 in that lake.

24 So I think -- I mean, the overall goal

25 that we want is to keep the zone of mixing as -- as

1 small as possible and, therefore, beyond that zone,  
2 protecting the downstream use to -- to the intended  
3 level of protection.

4 THE CHAIRPERSON: Thank you. Mr.  
5 Donihee...?

6 MR. JOHN DONIHEE: Thank you, Mr.  
7 Chairman. John Donihee. In your PowerPoint and  
8 technical report, AANDC makes a number of  
9 recommendations related to water quality closure and  
10 reclamation. Today you indicated to the Board that  
11 you're recommending that these matters be picked up as  
12 measures in the report of environmental assessment.  
13 I'm sure you're aware of the way the MVRMA works.

14 So I guess the question really is, is it  
15 your view that without the application of these  
16 measures, that significant environmental impacts will  
17 result?

18 THE CHAIRPERSON: Thank you, Mr.  
19 Donihee. I'm going to go to AANDC.

20

21 (BRIEF PAUSE)

22

23 MR. ROBERT JENKINS: Thank you, Mr.  
24 Chair. It's Robert Jenkins, Aboriginal Affairs. Thank  
25 you, Mr. Donihee, for that direct question. We are

1 recommending that these be placed as measures within  
2 the report. We do feel that these are things which  
3 need to be implemented for the project to proceed to an  
4 acceptable level.

5 So I guess if you were to look at it in  
6 another way, to flip it around, we do feel that these  
7 things are -- are needed to -- to prevent effects from  
8 the project.

9 THE CHAIRPERSON: Yeah, Mr. Donihee...?

10 MR. JOHN DONIHEE: Thank you, Mr.  
11 Chairman. Thank you, Mr. Jenkins. That was the only  
12 question on that. One (1) -- one (1) last question, I  
13 guess. And I'm just wondering if you could advise the  
14 Board as to whether there are any circumstances in  
15 which, from AANDC's perspective, it would be  
16 appropriate for a project like this to be approved if  
17 in fact a perpetual active treatment of -- of water  
18 post-closure was required.

19 And if -- if there are such  
20 circumstances, could you identify them for us, please?

21 THE CHAIRPERSON: Thank you. I'm going  
22 to go to AANDC.

23

24 (BRIEF PAUSE)

25

1 MR. ROBERT JENKINS: Thank you, Mr.

2 Chair. It's Robert Jenkins, Aboriginal Affairs.

3 Again, thank you for the question. I think that if it  
4 were found that perpetual water treatment was required  
5 for this project, and I'm by no means saying that I  
6 feel that -- that this is required, it still needs to  
7 be excluded a hundred percent.

8 But I think that if it was found that it  
9 is needed, there would be quite a few hurdles that the  
10 company would have to overcome as it moves through the  
11 regulatory permitting phase. So I don't think that it  
12 would be -- I can say, with -- you know, I don't want  
13 to say that it's project limiting. But I would say  
14 that it would be a very difficult path forward.

15 THE CHAIRPERSON: Thank you. To Mr.  
16 Donihee.

17 MR. JOHN DONIHEE: Thank you, Mr.  
18 Chairman. Those are my questions.

19 THE CHAIRPERSON: Thank you. I'm going  
20 to go to the Review -- Review Board members. I'm going  
21 to go to my far right. I'm going to go to Mr. John  
22 Curran.

23 MR. JOHN CURRAN: Thank you, Mr.  
24 Chairman. John Curran, the Review Board. No questions  
25 at this time for AANDC.

1 THE CHAIRPERSON: Thank you. I'm going  
2 to go to Mr. James Wah-shee, Board member.

3 MR. JAMES WAH-SHEE: Mr. Chair, I have  
4 no question at this time. Thank you.

5 THE CHAIRPERSON: Thank you. Mr.  
6 Richard Mercredi...?

7 MR. RICHARD MERCREDI: No questions at  
8 this time. Thank you, Mr. Chair.

9 THE CHAIRPERSON: Thank you. I'm going  
10 to go to Mr. Danny Bayha, Board member.

11 MR. DANNY BAYHA: Thank you, Mr. Chair.  
12 I just have one (1) question. As you were here this  
13 morning, we had some presentations and some possible  
14 recommendations on monitoring agencies to be involved  
15 in the long-term operation of this mine.

16 Would you recommend that that be the  
17 case or you -- you agree with the party's  
18 recommendations on the earlier submissions? Thank you.

19 THE CHAIRPERSON: Thank you. I'm going  
20 to go to AANDC.

21 MR. ROBERT JENKINS: Thank you, Mr.  
22 Chair. It's Robert Jenkins, Aboriginal Affairs. We  
23 haven't really thought fully about whether or not an  
24 independent monitoring agency is needed for this  
25 project. I think it's a question that does come up

1 each time. I think the gold (sic) for any project is  
2 to make sure that people stay informed, that they know  
3 what's going on, that they can raise their concerns.  
4 And I think that, you know, in each case we need to  
5 look at whether that is being achieved through the  
6 current regulatory system, and if there are gaps how do  
7 we fill those gaps, and -- and can we rely on current,  
8 I guess, infrastructure, or whether we need to create  
9 something new.

10 So I didn't really give you a direct yes  
11 or no on that. And that was partly on purpose, but I  
12 think that right now -- I think it's something that,  
13 moving forward, as we get to the, again, the regulatory  
14 phase, we look at whether or not this is needed. I  
15 think there's a lot of discussion that needs to take  
16 place.

17 And I think the other thing that needs  
18 to be done is an evaluation of the existing independent  
19 monitoring agencies that are out there: their purpose,  
20 whether that could be done somewhere else, or is that  
21 needed. Is it still needed? What -- you know, lessons  
22 learned, I guess.

23 THE CHAIRPERSON: Thank you. I want to  
24 go back to Board member Danny Bayha.

25 MR. DANNY BAYHA: Okay, thank you, Mr.



1 Chair. Danny Bayha, Review Board. I -- I -- just had  
2 a question. Earlier you mentioned that the -- some of  
3 the information, you had quite a bit more information  
4 recently. And in light of that, as well as some of the  
5 recommendations you put forth in your PowerPoint, would  
6 that change? Would -- would that alter some of the  
7 things that you've put forward? Or -- so I just -- if  
8 you could comment on that. Thank you.

9 THE CHAIRPERSON: Thank you. I'm going  
10 to AANDC.

11 MR. ROBERT JENKINS: Thank you. It's  
12 Robert Jenkins, Aboriginal Affairs. The information I  
13 referred to is the information that came in recently, I  
14 think it was last week, on closure from the -- from the  
15 developer. And the other thing that we had mentioned  
16 which might alter some of our recommendations is the  
17 forthcoming report from the Tlicho. So I think that  
18 we're going to be looking at that.

19 I think the Board is providing an  
20 opportunity to provide written statements at a later  
21 date. They're keeping the public record open. So I  
22 think that once we fully flesh out and -- and talk  
23 about the information that came in recently, last week,  
24 as well as what's forthcoming, if we do need to modify  
25 or tweak, or -- or -- any of our recommendations, we --

1 we will.

2 THE CHAIRPERSON: Thank you. Go to Mr.  
3 Bayha.

4 MR. DANNY BAYHA: Okay, thank you. And  
5 -- and just one (1) follow-up question from Dr. Racher  
6 about the term -- terminology issues we have have  
7 substantially unaltered. Again, we need to be sort of,  
8 as -- as people and folks in the field, and out there,  
9 and regulators, and -- and enforcers and people in  
10 communities as well, need to understand when we're  
11 talking about terminology, we need to be very clear  
12 exactly what we're talking about.

13 So I would -- I guess the question in  
14 this case, again, substantially unaltered. I think if  
15 -- you -- you gave us some indicators of -- of  
16 indications of what is acceptable to yourself as the  
17 department lead in -- in looking after the environment,  
18 as well as -- as the regulatory agency. So I  
19 would ask again if you could be more clear on exactly,  
20 and give us a level of -- everybody as well in the room  
21 and the people involved in this -- to this proceedings,  
22 and -- and to the company as well, and the communities,  
23 that what do you mean when you're talking about  
24 "substantially unaltered"?

25 You mentioned that it was earlier

1 mentioned that it is part of the Tlicho land agreement,  
2 but we -- you know, from their understanding you need  
3 to sort of give us something when you talk about those  
4 things. And I think certainly the narrative statements  
5 working towards as goals, is probably something that's  
6 -- that's probably workable. But we need to have  
7 something that we can -- the Board can use as a way of  
8 -- of going forward with this. Thank you.

9                   Sorry, it's a question. So if you  
10 could, maybe, expand a bit more on the -- the wording  
11 of "substantially unaltered." What do you mean, what  
12 do you think, what your thoughts are initially? Maybe  
13 a way of -- of making it work, if you will, so that  
14 folks in -- in the company as well as communities can  
15 have common understanding when you talk about those  
16 type of terms. How can we make it work so that  
17 everybody can work together in this? Thank you.

18                   THE CHAIRPERSON: Thank you. I'm going  
19 to go to AANDC.

20                   MR. ROBERT JENKINS: Thank you, Mr.  
21 Chair. It's Robert Jenkins, Aboriginal Affairs. Yes,  
22 I think that, ideally, we would have numerical  
23 concentration levels that you could recommend. So you  
24 could say, we'd like to have five (5) for this, or  
25 seven (7) for that.

1 I don't think we're there, and that's  
2 why we put to the Board that what we feel to -- to move  
3 forward out of the environmental assessment process is  
4 to define what are we trying to protect. And once we  
5 know what we're trying to protect, we can translate  
6 that into -- into numerical concentrations when we move  
7 into the water licensing phase.

8 In regards to "substantially unaltered,"  
9 one (1) of the things that we had talked about natural  
10 range of -- of variability. And we talked about that a  
11 lot when -- when I gave the presentation to the Board  
12 at the Canadian Zinc hearing. And so I think that  
13 there's different ways to go about that. There's a --  
14 a 95th percentile, there's two (2) standard deviations.  
15 But I think the goal is to sort of, in essence,  
16 maintain the water concentrations within what is there  
17 now.

18 And so the key, then, is to go back and  
19 have a solid base on the background concentrations in  
20 the Marian River. So -- so I think that that answer  
21 could be -- if that's the way forward, that answer  
22 could be found, I think, fairly quickly.

23 THE CHAIRPERSON: Thank you. I'm going  
24 to go to Mr. Bayha.

25 MR. DANNY BAYHA: Thank you, Mr. Chair.

1 Danny Bayha. Yeah, I guess -- I mean, that's -- in  
2 other words, for me, I think it would be good to have  
3 that understanding where we can start working together  
4 as well. I mean, you know, we talk about all these  
5 nice things and how we can go about them, but who is  
6 going to be actually the lead doing this sort of thing?  
7 Who is going to put it all together and make it work  
8 for -- so that things can be -- the communication's  
9 important. That can happen throughout every -- in this  
10 process, as well as when the operation of the company's  
11 happening, as well as closure. Thank you.

12 THE CHAIRPERSON: Thank you. Mr. --  
13 AANDC, did you want to respond to that? Thank you.

14 MR. ROBERT JENKINS: Yes. Thank you,  
15 Mr. Chair. It's Robert Jenkins, Aboriginal Affairs.  
16 Yeah, if I could just answer that, I think -- I think  
17 obviously that the projects being developed by Fortune  
18 Minerals or -- so, in any case, the onus and collection  
19 of a lot of the data and -- and production of that data  
20 is -- is -- lies with the developer.

21 That said, the Crown and other  
22 governments do have its own, in some areas, monitoring  
23 results which could provide -- and we need to make  
24 sure, like you said -- I agree with you, that we work  
25 together to get the best data set that can be used as

1 we move forward. So -- so yes. Thank you.

2 THE CHAIRPERSON: Thank you. Is there  
3 any more -- any more comments from Mr. Bayha, any more  
4 questions?

5 MR. DANNY BAYHA: Mr. Chair, thank you.  
6 No more comments.

7 THE CHAIRPERSON: Thank you. And we'll  
8 go to Board member Rachel Crapeau.

9 MS. RACHEL CRAPEAU: I -- this is  
10 Rachel Crapeau. The one (1) thing that I remember  
11 growing up was, when lots of children ran around on the  
12 edge of the lake or river system, I always used to see  
13 tiny little fish. Everybody collect the little fish.  
14 And we used to put them in containers and try to keep  
15 them.

16 And the other thing that I noticed not  
17 too long ago, and it was maybe fifteen (15) years ago  
18 now, children collecting frogs. And I haven't seen  
19 that lately. And I -- I remember thinking about that,  
20 because, at my sister Helen Toby's (phonetic) house,  
21 when I went to -- to the sink to wash dishes, I was  
22 surprised to see a fairly large frog floating in the  
23 sink, and it scared the heck out of me.

24 And I found out that my son had found  
25 that frog and put it in the sink, thinking that he was

1 going to keep it and it will live with us in the house.  
2 But he didn't know that water and soap detergent does  
3 not make for a good environment for such things as  
4 frogs to survive.

5 I'm just talking about this story  
6 because, from your recommendations regarding site-  
7 specific water quality objectives, you're recommending  
8 that water-quality changes will not significantly  
9 affect the benthic macro-invertebrates and plankton  
10 abundance. Also, the water-quality changes will not  
11 signific -- significantly alter fish abundance, and  
12 then the water quality will not negatively affect areas  
13 such as the traditional drinking water.

14 And I was thinking the drinking water  
15 and traditional use of areas and the Marian River are  
16 of great importance to people.

17 So how will you -- your recommendations  
18 be considered in -- in the future, because it's going  
19 to be many years that this mine will be in place before  
20 the -- the Peanut Lake receives water and it flows down  
21 towards Marian River.

22 How much change are we going to see in  
23 peoples' ability to gather fish and make dry fish  
24 because the people will be there for many years. But,  
25 as we know, government people come and go, mining

1 company people come and go, so how -- how are we going  
2 to monitor the situation there?

3 From what I heard, the -- the AEMP  
4 working group hasn't met. Why is that? Something's  
5 going on here, so I just kind of like wanted to know  
6 how does it look, you know, with recommendations and --  
7 and trying to make them work in the future?

8 THE CHAIRPERSON: Thank you. I'm going  
9 to go to AANDC.

10 MR. ROBERT JENKINS: Thank you, Mr.  
11 Chair. It's Robert Jenkins, Aboriginal Affairs. I  
12 don't think that the -- we have been meeting as a -- as  
13 a working group. The company actually approached  
14 Government and other people quite early on in the  
15 process, so I think that recently we were -- we were  
16 going to meet, but just couldn't. And -- and so I  
17 think we'll meet again near in the future.

18 The -- what you talked about with the  
19 recommendations that we put forward on changes, these  
20 are things we'd like to, as we mentioned earlier,  
21 captured in the report of EA. And this sort of sets  
22 the stage on what we're trying to protect over the life  
23 of this project and -- and, in essence, beyond.

24 How do we do that? Well, 1) you would  
25 go and you'd -- you would determine what levels at



1 which the proponent can discharge into the water  
2 system.

3 And then how do you confirm that? And  
4 that's probably the more important point. How are we  
5 knowing what's going on and -- and how do we know that  
6 we're not going beyond this? Well, this is the key to  
7 developing that program and, so, these programs are  
8 often tied in -- in a legal requirement of a -- of a  
9 water licence.

10 What -- what we were putting forward as  
11 a recommendation was that the guidelines that we  
12 develop, which were developed back in 2009 and -- and  
13 included much stakeholder input to put them together.  
14 We feel that that should be followed.

15 And -- and the point -- it's a -- it's a  
16 minute point, but it's -- but I guess it's a bit of a  
17 big point because we raised it, is that the company  
18 said that they would consider it. And we want it to be  
19 followed.

20 And so we don't want it to be considered  
21 to be followed, we want it to be followed. So I think  
22 that we're going to -- to -- to move forward, and we're  
23 moving forward together. I think we'll have more  
24 discussions. But I think like you said, the key to  
25 viewing what are the changes and are we going beyond

1 what people wanted, that gets confirmed.

2                   So there's monitoring of benthic  
3 invertebrates, there's monitoring of fish, and there's  
4 things done through this program. And the other side  
5 of it is that if you're seeing things happening, that  
6 you set up a system so that you implement changes  
7 before you get to a point where you go beyond what you  
8 didn't want to see.

9                   And so, that's another aspect of our  
10 guidelines, is taking the results and tying that to  
11 management of the site, and tying that to either  
12 changing operations, increasing monitoring, or doing  
13 different things so that you don't go beyond what you  
14 didn't want. You know, you don't go to where you  
15 didn't want to go.

16                   THE CHAIRPERSON:    Okay, thank you.  
17 Rachel Crapeau, is there any further questions?

18                   MS. RACHEL CRAPEAU:   I've got many more  
19 questions, but I'll leave it till tomorrow. Thank you  
20 very much.

21                   THE CHAIRPERSON:    Okay. Thank you.  
22 I'm going to go to Board member Percy Hardisty.

23                   MR. PERCY HARDISTY:   Masi, Mr. Chair.  
24 I -- I do not have any questions at this time. Masi.

25                   THE CHAIRPERSON:    Okay. Thank you. I

1 want to thank AANDC for coming up and doing their  
2 presentation. We're going to take a fifteen (15)  
3 minute break. While we're doing that I'm going to get  
4 the Tlicho to come up and set up their -- for their  
5 presentation while we're doing that.

6 So a fifteen (15) minute break.

7

8 --- Upon recessing at 3:03 p.m.

9 --- Upon resuming at 3:18 p.m.

10

11 THE CHAIRPERSON: Just before we  
12 start, I'll -- again, channel 2 for the Tlicho  
13 language, English is channel 4, and channel 6 is so the  
14 Board members -- and it's the floor, so you can listen  
15 on that.

16 So, if we're almost ready to start I'm  
17 going to turn it over to the Tlicho Government for  
18 their presentation. Ginger Gibson...?

19

20 WATER QUALITY, OPERATIONS, and CLOSURE PRESENTATION BY  
21 TLICHO GOVERNMENT:

22 MR. HENRY ZOE: Good afternoon, Mr.  
23 Chairman. Mr. Chairman, Chapter 21 -- oh, sorry, Henry  
24 Zoe, Senior Community Director, Tlicho Government. Mr.  
25 Chairman, Chapter 21, Water Rights and Management in

1 our Tlicho Agreement states that under Section 21.2.3:

2 "Subject to any use of water, deposit  
3 of waste, or activity referred to in  
4 Section 21.31.2 or 21.3.3 that is  
5 authorized issued by the Wek'eezhii  
6 Land and Water Board, or by..."

7

8 (BRIEF PAUSE)

9

10 MR. HENRY ZOE: Okay. Where was I?

11 "...or by any other competent water  
12 authority, the Tlicho First Nation  
13 has the right to have waters which  
14 are on or flow through or are  
15 adjacent to Tlicho lands remain  
16 substantially unaltered as to  
17 quality, quantity, and rate of flow  
18 when such waters are on, or flow  
19 through, or are adjacent to Tlicho  
20 lands."

21 Mr. Chairman, Marian River watershed,  
22 including Burke Lake, Deto Tia, is intrinsically  
23 valuable to the Tlicho people who continue to use the  
24 Deto Tia for cultural purposes including trapping rat -  
25 - muskrat and beavers, duck hunting and egg collecting,

1 travel routes during summer and winter, and drinking  
2 water source while on the land. Mr. Chairman, the Deto  
3 Tia is within Tlichó owned land and must remain  
4 substantially unaltered as to quality, quantity, and  
5 rate of flow.

6 Mr. Chairman, before I continue with my  
7 comments I'd like to turn over the mic to Elder Louie  
8 Zoe to make a few comments, and then I'll return to my  
9 original comments. Masi.

10 THE CHAIRPERSON: Thank you. We'll go  
11 to the Elder Louie Zoe.

12

13 (INTERPRETED FROM TLICHO INTO ENGLISH)

14

15 ELDER LOUIE ZOE: I am from Gameti. My  
16 name is Louie Zoe. I'd just like to thank everyone for  
17 giving me the opport -- the opportunity to talk. I am  
18 here to speak on what concerns me and we're also here  
19 to exchange all sorts of information to lands and  
20 water.

21 They are talking about a proposed mine  
22 at the Nico Lake. So they are now currently talking  
23 about the plants. They're also -- they're also talked  
24 about the -- the dust that is carried by the wind and  
25 all the water that's going to drain into -- into rivers

1 as -- as well as into small lakes.

2                   Now, my concern is about the water being  
3 polluted. Our ancestors have used that area quite a  
4 bit. They depended on it. They also use it for  
5 medicine. They -- they survived by living off that  
6 area. And there's also certain roots in that area that  
7 can be used for all sorts of eye infections. And they  
8 also use the area to -- to make snowshoes. They --  
9 they have a lot of different kind of trees in that  
10 area.

11                   So therefore, we do not want to see any  
12 damages done. And -- and the birds that go through  
13 there, they also have feeding areas. And they also lay  
14 eggs around that area. There's a lot of small games,  
15 including rabbits, muskrats. And we do not want to see  
16 any harm done to the animals that live there.

17                   And what about the berries? If there's  
18 too much dust and -- and if it keeps coming down with  
19 the rain, it will destroy the berries. And all that  
20 moss, that moss, at one (1) time, was used for diapers.  
21 And -- and there were certain areas of -- of moss that  
22 were used for diapers way back when they didn't have  
23 any cloth diapers.

24                   And what about the water? If the -- if  
25 the chemicals flow into -- into wetlands and that

1 drains into the river, if -- if there is a high  
2 concentration of chemicals in that water, all that can  
3 destroy all sorts of life in that area.

4                   So in the near future we might not be  
5 able to use water. And way back when my ancestors were  
6 -- were younger and they were able to travel through  
7 that area, they -- they depended on small games, and  
8 also wetland caribou, and als -- and the other caribou  
9 to survive.

10                   And I now sit here and think about all  
11 of -- all of that we might lose in the near future.  
12 And there is also bur -- old burial sites that were  
13 destroyed by the forest fire. And they're also talking  
14 about an all-weather road. I am thinking about that  
15 too.

16                   So when they talk about the proposed --  
17 this proposed mine, we use to travel by freighter  
18 canoes, sometimes by the canoes that we paddle with.  
19 And we used to go hunting for -- for moose. And that  
20 area is also very good for caribou.

21                   And our ancestors, which also includes  
22 my parents, they -- they used -- they used to chop  
23 wood. They used to stop there, cut down -- cut down  
24 some trees. And they used to travel to -- to the  
25 barren lands. So that area we -- we depended on for a

1 lot of -- a lot of things.

2 So we would like the water system to be  
3 closely monitored so that it doesn't get very highly  
4 polluted. Masi.

5

6 (INTERPRETATION CONCLUDED)

7

8 THE CHAIRPERSON: Thank you. I go back  
9 to Mr. Zoe.

10

11 (INTERPRETED FROM TLICHO INTO ENGLISH)

12

13 MR. HENRY ZOE: The Tlicho Government  
14 has met with Elders and SENES, our consultant, to  
15 discuss the -- the SSWQOs and to conduct our own risk  
16 assessment. Tlicho acceptance of risks associated with  
17 SSWQOs remain conditional, pending recommendations  
18 being accepted.

19 In keeping with traditional values of  
20 the Tlicho people and the Tlicho agreement and the need  
21 to protect the water and the land for future  
22 generations, the report of the environmental assessment  
23 should include water quality goals that describe the  
24 level of protection to be afforded to the aquatic  
25 receiving environment.



1                   The water quality goals should be  
2 applied to Burke Lake in order to protect the ongoing  
3 use of the area for cultural, spiritual and subsistence  
4 purposes.

5                   Mr. Chairman, we agree with these  
6 statements that have been drafted by AANDC, and we  
7 include them here. However, we would use all the lakes  
8 in the region. We want the Deto Tia or Burke Lake to  
9 be protected. We do not believe that aquatic health  
10 viability is adequate to -- to protect traditional use.

11

12                  Mr. Chairman, ongoing protection of --  
13 of the Tlicho peoples' use of Burke Lake for the  
14 following purposes is critical to maintain their  
15 traditional way of life: muskrat and beaver trapping,  
16 travel route during summer and winter, drinking water  
17 source while on the land, duck hunting and duck egg  
18 collection, et cetera.

19                  Mr. Chairman, the report of the  
20 environmental assessment should require that the final  
21 SSWQOs be based upon the Tlicho peoples' traditional  
22 use of the downstream aquatic environment now and into  
23 the future.

24                  Mr. Chairman, it's been recently  
25 clarified that all of Peanut Lake will be considered a

1 mixing zone. Burke Lake is just downstream of Peanut  
2 Lake, therefore, it is critical that the setting of the  
3 SSWQOs be done in a rigorous and thorough manner.

4 Now I turn to Stacey at Senes, which I  
5 believe she's on line.

6 DR. GINGER GIBSON: Yeah. Stacey, you  
7 should have the floor.

8 MS. STACEY FERNANDEZ: (ON PHONE)  
9 Thank you. Good afternoon. Thank you for the  
10 opportunity to speak to the group, Mr. Chairman, and  
11 all participants. We were hired by the Tlicho  
12 Government to look over the development of the surface  
13 site-specific water quality objectives, and the other  
14 documents that have been submitted including the ones  
15 by AA -- AANDC.

16 And this slide here is the support of  
17 some of the development of the SSWQOs that AANDC have  
18 suggested, and that's to include not only the toxicity  
19 data, but also the ex -- expected conditions from the  
20 treatment plant RO and then into the future with the  
21 passive wetlands or constructive wetland treatments.  
22 That may require different SSWQOs to be developed for  
23 different stages of the process, but we think it --  
24 it's important to include this aspect, as well as the  
25 guidance from CCME on driving SSWQOs.

1 Existing background conditions are also  
2 important, and as well as the existing toxicity  
3 information which, so far, Fortune has provided  
4 documentation on and there is some ongoing discussion  
5 about the appropriateness of some of those numbers.

6 In the SSWQO development process, it's  
7 integral that the Tlicho Agreement 21.2.3, which was  
8 just put forth before everyone, be included in the  
9 setting of that, and the philosophy that's included  
10 there. And we've had some discussion today about what  
11 that would be and what "substantially unaltered" means.

12 The Tlicho Government has indicated that  
13 they also support what AN -- AANDC is that it --  
14 "substantially unaltered" means "unchanged." So that  
15 would be the concentrations upstream and downstream in  
16 Marian River are the same; that the concentrations  
17 couldn't be detected.

18 If Fortune has any other interpretation  
19 of that phrase, then that's something that needs to be  
20 quite clearly communicated to all the stakeholders, and  
21 the Tlicho government can then decide if that's  
22 appropriate or not. But, at the moment, that's what we  
23 are taking "substantially unaltered" to mean.

24 So the next slide. This is the  
25 application of the SSWQOs. I think we've touch on that

1 previously to this slide, as well by other  
2 presentations. But we believe that the SSWQOs should  
3 be applied at all phases of the life cycle; that  
4 includes operation, and into active closure, post  
5 closure.

6                   As we indicated, due to the inclusion of  
7 expected conditions that may result in duff --  
8 different SSWQOs, as well as background conditions are  
9 quite different in Nico and Peanut Lakes. So, it  
10 wouldn't be surprising that you would have different  
11 SSWQOs in different phases of the -- of the project, as  
12 well as in different -- spatially.

13                   This next point is something that I  
14 guess has been clarified today, about what exactly the  
15 mixing zone is interpreted to be and, that is, as I  
16 understand it now, all of Peanut Lake during  
17 operations. There would still be some question about  
18 what that would be in the post closure, once the path  
19 is -- the system is in place and working as expected,  
20 what the mixing zone would be at that point. And, to  
21 date, we've assumed that the SSWQOs would be applied to  
22 all of Peanut and Nico Lake in -- after post closure.

23                   The next slide, please. In the recent  
24 memo that Fortune Minerals submitted, that's August  
25 20th memo, there was a table there that listed five (5)

1 contaminants of potential concern where SSWQOs would be  
2 developed. Those were arsenic, cobalt, iron, lead and  
3 selenium.

4 Previous dialogue and discuss --  
5 documents that have been submitted and reviewed, we  
6 have in general agreed with the toxicological basis of  
7 the proposed values for cobalt, iron and lead. But, at  
8 the moment, we have not yet agreed with the arsenic and  
9 selenium. We do not believe that, so far, Fortune  
10 Minerals has demonstrated that these values would be  
11 protective of aquatic biota.

12 I think we'd also just like to mention  
13 that we'd like a consistent list of COPCs will be  
14 developed for SSWQOs. I understand that, to date,  
15 there's been some changes in the project, so that list  
16 has been changing. But we did notice that in that  
17 August 20th memo, the table in the memo listed five  
18 (5); yet, in Attachment B there was a more extensive  
19 list of COPCs where SSWQOs were applied.

20 Also, the philosophy that we'd adopted  
21 that if SSWQOs have not been developed, then CCME  
22 generic water quality objectives need to be applied.  
23 And, again, in Attachment B that wasn't the process  
24 that was undertaken.

25 So I -- I understand that things are --

1 that have been changing, but just to reiterate that  
2 that would be our philosophy, that if there's no SSWQO,  
3 then CCME is the guiding water quality guideline that  
4 should be applied.

5                   The next two (2) slides I will actually  
6 skip over fairly quickly. I don't want to bog down our  
7 discussion today in details on specific discussions on  
8 these water quality toxicological basis. We've  
9 provided them in writing. These slides on arsenic and  
10 selenium are merely here as a reminder that there is  
11 some discussion ongoing on the numerical values of the  
12 toxicological basis for the SSWQOs, as well as the  
13 moving forward with -- with the potential for a  
14 narrative statement.

15                   I think that'll close my portion of the  
16 assessment, and I'll turn it back to the Tlicho  
17 government for the final word in this presentation.

18                   MR. HENRY ZOE: And thank you, Stacey.

19 Mr.

20 Chairman, the Tlicho government has made recommendation  
21 for five (5) measures to be included in the report of  
22 the environmental assessment. We require these  
23 measures to be addressed. I'd like to thank the Board  
24 for giving us the opportunity to make this  
25 presentation. Masi.

1 THE CHAIRPERSON: Thank you, Mr. Zoe.

2 Thank you for the presentation from the Tlicho

3 government.

4 I'm going to start in the order from the

5 top now, down -- to put questions to the Tlicho

6 government for -- on their presentation. I want to go

7 to Fortune Minerals.

8 Is there any questions for -- to the

9 Tlicho government on their presentation?

10

11 QUESTION PERIOD:

12 DR. RICK SCHRYER: Rick Schryer,

13 Fortune Minerals. No questions at this time. Thank

14 you.

15 THE CHAIRPERSON: Okay, thank you.

16 Yellowknives Dene First Nation? Todd Slack in the back

17 said no questions.

18 To continue on, Akaitcho IMA office...?

19

20 (BRIEF PAUSE)

21

22 THE CHAIRPERSON: There's nobody.

23 Nobody's here.

24 Continuing on to North Slave Metis

25 Alliance, questions for -- to the Tlicho government on

1 their presentation?

2 MR. BILL ENGE: Yes, thank you,  
3 Chairman. Bill Enge for the North Slave Metis  
4 Alliance.

5 I think it's more of a comment than a --  
6 a question. I -- I guess I'll have to see if it frames  
7 out that way, but the five (5) measures that the Tlicho  
8 have stipulated they would like to see respected before  
9 approval of the mine goes ahead has not landed on my  
10 desk as of yet, and I certainly would like to see what  
11 those measures are.

12 But I do want to state to the effect  
13 right now that the North Slave Metis Alliance is very  
14 concerned about the condition that the water is going  
15 to be facing, and mitigating measures are in -- in line  
16 with what the North Slave Metis Alliance agrees with.  
17 Thank you.

18 THE CHAIRPERSON: Before I go to the  
19 Tlicho government, I just wanted to -- it was pointed  
20 out to me that the five (5) recommendations are on the  
21 Mackenzie Valley Review Board website. But, anyways,  
22 I'll go to the Tlicho government, if they want to add  
23 to that.

24 DR. GINGER GIBSON: We have no comment  
25 at this time. Masi cho.



1 THE CHAIRPERSON: Thank you. Continue  
2 on, Mr. Enge, if there's any further questions.

3 MR. BILL ENGE: Thank you, Mr.  
4 Chairman. No, I don't have any further questions at  
5 this time. Thank you.

6 THE CHAIRPERSON: Thank you, Mr. Enge.  
7 I'm going to continue on with Fisheries  
8 and Oceans Canada.

9 MS. SARAH OLIVIER: Sarah Olivier with  
10 Fisheries and Oceans. No questions for the Tlicho  
11 government. Thank you.

12 THE CHAIRPERSON: Okay. Thank you.  
13 I'm going to go to the Government of the  
14 Northwest Territories.

15 MS. KIMBERLY BALSILLIE: Kimberly  
16 Balsillie with GNWT. No questions at this time.

17 THE CHAIRPERSON: Okay. Thank you.  
18 I'm going to go to Aboriginal Affairs Northern  
19 Development Canada, AANDC.

20 MR. ROBERT JENKINS: Thank you, Mr.  
21 Chair. Robert Jenkins. No questions.

22 THE CHAIRPERSON: Okay. Thank you.  
23 I'm going to continue on with Environment Canada.

24 MR. CAREY OGILVIE: Carey Ogilvie,  
25 Environment Canada. No more questions, Mr. Chairman.

1 Thank you.

2 THE CHAIRPERSON: Okay. Thank you.

3 Transport Canada...?

4 MR. DALE KIRKLAND: Dale Kirkland,

5 Transport Canada. No questions, Mr. Chair.

6 THE CHAIRPERSON: Thank you. Natural

7 Resources Canada...?

8 MR. JOHN KING: John King, Natural

9 Resources Canada. No questions. Masi.

10 THE CHAIRPERSON: Review Board

11 staff...?

12 DR. KATHY RACHER: Kathy Racher for the

13 Board. Thank you for your presentation. It was very

14 good.

15 The Aboriginal Affairs has proposed a

16 series of narrative statements, which I see from your

17 presentation for -- for site-specific water quality

18 objectives, I should say. And I see from your

19 presentation that -- that you have adopted those, which

20 is very helpful to know.

21 I just wondered if, based on some of the

22 clarification -- questions of clarification that I

23 asked of AANDC -- DC this morning, if you had any

24 further clarifications on what those goals mean to you,

25 or how they should be worded?

1 THE CHAIRPERSON: Thank you. I'll go  
2 to the Tlicho government.

3

4 (BRIEF PAUSE)

5

6 DR. GINGER GIBSON: Masi, Dr. -- Dr.  
7 Racher, for your question. Ginger Gibson for the  
8 Tlicho government.

9 The interpretation that was put forward  
10 by AANDC is, indeed, the interpretation that the Tlicho  
11 government has suggested as measures. We have -- we  
12 have noted that AANDC's clarification today has  
13 primarily focussed on the chemical or quantitative end  
14 of things, and has pointed towards the Tlicho  
15 government and to land users and -- and harvesters for  
16 the qualitative interpretation, and -- and we believe  
17 that is rightly so.

18 We'd like to note that, in the Tlicho  
19 agreement, the rate of flow is noted. Elder Louie Zoe  
20 has spoken to us in the past and -- and many of the  
21 Elders that are attending here today speak to us about  
22 paddling straight to Deto Tia, to Burke Lake, as well  
23 as travelling through Lou Lake and through the region  
24 throughout the winter, so that's all-season use of the  
25 region by both foot, dog team, skidoo, and canoe --

1 freighter canoe.

2 That requires that the lake and river  
3 levels be maintained so that use is continuous and so  
4 we will have questions with respect to this particular  
5 end of things, especially when it comes to the  
6 mitigation proposed by the developer on withdrawing  
7 water from the Marian River in order to actively fill  
8 the pit.

9 But I hope that that answers your  
10 question with respect to adding some clarity. We do  
11 believe that this will be given more clarity, this  
12 concept will be given more clarity as we move towards  
13 the closure concept, but also through our own  
14 deliberations on this concept. Masi.

15 THE CHAIRPERSON: Thank you. We'll go  
16 back to the Review Board staff.

17 DR. KATHY RACHER: Kathy Racher for the  
18 Board. So I guess I would -- and the follow-up  
19 question to that would be do -- do you believe that if  
20 these statements remained true throughout the life of  
21 the project, the way that you've interpreted them,  
22 using the traditional uses that you've listed for Burke  
23 Lake and -- and Marian River, that -- so if this --  
24 these statements remain true throughout the life of the  
25 project and post-closure, that the project would be

1 said to have no significant effect on water quality?

2 THE CHAIRPERSON: Thank you. I'll go  
3 back to the Tlicho government.

4

5 (BRIEF PAUSE)

6

7 DR. GINGER GIBSON: Masi, for your  
8 question. Ginger Gibson, Tlicho government. In -- the  
9 Elders speak about using all of the lakes of the region  
10 for many purposes, for hunting, for harvesting, for  
11 traditional medicines. Lou Lake, for example, for  
12 traditional medicines, for berry picking, for wood  
13 gathering, and indeed -- indeed, many of the families,  
14 some who are here in the room now use the area  
15 themselves currently.

16 Our Chief Chocolate spoke about using  
17 the area himself with his children and having been  
18 raised in that area. It -- it seems clear that Nico  
19 and Peanut Lake are two (2) lakes that will be  
20 impacted, significantly impacted.

21 We are looking to these narratives to be  
22 informative. We are looking to them to protect water  
23 quality in Deto Tia.

24

25 (BRIEF PAUSE)

1

2 DR. GINGER GIBSON: And -- and we do  
3 feel that there are remaining information gaps that  
4 we're looking to this process to yield and to the  
5 company to -- to yield to us. Masi.

6 THE CHAIRPERSON: Okay. Thank you.  
7 I'll go back to the Review Board staff.

8 DR. KATHY RACHER: Kat -- Kathy Racher  
9 for the Board. I have two (2) questions -- only two  
10 (2) questions, but both about some terminology.

11 Earlier you asked a question of Fortune  
12 Minerals about the perceived risk of water, so as a  
13 chemist I could go in and test the water in Burke Lake  
14 and tell you the -- all the numbers and tell you  
15 they're all below guidelines and that you should go  
16 ahead and drink it, but if you -- you know, if you --  
17 it doesn't feel right to you, you're not going to do it  
18 even if -- if -- even if the science tells you it's  
19 okay. And I certainly understand that.

20 And I'm just wondering, is there any way  
21 to mitigate against for perceived risk? Is there any  
22 way to -- through the project, through monitoring or --  
23 or some other way to help eliminate the perceived risk?

24 THE CHAIRPERSON: Thank you. I'll go  
25 back to the Tlicho Government.

1

2

(BRIEF PAUSE)

3

4

DR. GINGER GIBSON: Masi for your  
question. Ginger Gibson, Tlicho government. There's,  
I think, a twofold answer to this question.

7

Firstly, I think we need to look to the  
TK study to -- to uncover this question of avoidance,  
loss of use, due to perception of contamination. And -  
- and so we'll look to that study to -- to yield some  
data on that question. And -- and I -- and hopefully  
yield some data on mitigations with respect to that.

13

The Tlicho government is -- ha -- will  
be promoting and -- and is actively promoting  
independent monitoring. Our chiefs speak very strongly  
about independent monitoring. A lot of -- of -- I  
mean, it's about witnessing the land and having trust  
in the institutions that are -- are taking care of the  
land.

20

And so part of it will be community-  
based monitoring that is designed with the full and  
active participation of the Tlicho government and  
Elders and land users in that program so that there is  
community-based monitoring that is designed not by the  
company but jointly designed and in an independent

1 fashion.

2                   So I think it's all about communication,  
3 education, information sharing, but also about trust in  
4 institutions and -- and trust that the Tlicho  
5 government will have an -- an independent monitoring  
6 agency. Masi.

7                   THE CHAIRPERSON: Thank you. I'll go  
8 back to the Review Board staff.

9

10                   (BRIEF PAUSE)

11

12                   DR. KATHY RACHER: Kathy Racher, from -  
13 - for the Board. I guess this is kind of a followup to  
14 the last question.

15                   In Whati, on Monday, we heard a number  
16 of Elders and youth talk about their concerns about the  
17 effects of the project on water. And at some point,  
18 people said they wanted to make sure the water was  
19 clean, that they didn't think it would be clean.

20                   And again, it's a terminology of --  
21 maybe you could help me, as a scientist, understand  
22 what the -- what the Tlicho's vision of -- or version  
23 or -- of "clean" is, to help me translate that into  
24 some scientific criteria.

25                   THE CHAIRPERSON: Thank you. I'll go



1 to the Tlicho Government.

2 DR. GINGER GIBSON: Masi. Ginger  
3 Gibson, Tlicho Government. I just want to mention that  
4 my colleague, Henry, has to leave. So masi, Henry Zoe,  
5 for your -- your contributions and a safe trip.

6 The -- the answer to your question is  
7 that -- I think we've provided some guidance on this,  
8 is that "clean" means is -- "clean" means "unchanged."

9 Dr. Fernandez provided us some -- I  
10 think some useful statements in her presentation that  
11 we can look to the transcript for that in -- in respect  
12 -- with respect to water quality remaining unchanged  
13 above and below in concentrations, but also unchanged  
14 in -- in rate of flow so that traditional use is not  
15 interrupted and I think confidence in that -- in -- in  
16 the -- in the lack of change. Masi.

17 THE CHAIRPERSON: Thank you. I'm going  
18 to go back to the Review Board staff.

19 MR. JOHN DONIHEE: Thank you, Mr.  
20 Chairman. It's John Donihee.

21 Your PowerPoint and Mr. Zoe's  
22 presentation started off with section 21.2.3 of the  
23 Tlicho agreement. It's -- it's a section that speaks  
24 specifically to Tlicho rights. And I -- I take it that  
25 reading it in -- in its entirety is intended to

1 emphasis the importance of those rights.

2 But, as I read that section, what it  
3 says is that Tlicho rights are -- are qualified; at  
4 least the right set out in that particular section is  
5 qualified by two (2) other sections of the land claim  
6 and, likewise, by any decision that might be made by  
7 the Wek'eezhii Land and Water Board.

8 And so, I guess what I'm -- I'm not  
9 trying to stimulate some kind of legal debate, I'm just  
10 -- as you are aware, the MVRMA system is integrated,  
11 and so what this Board may say to the Wek'eezhii Land  
12 and Water Board through ministers and the Tlicho  
13 government is important.

14 And I guess the question I have, really,  
15 is, you know, in respect of the recommendations that  
16 you've provided in this section on -- on water, you  
17 know, can you -- can you indicate to the Review Board,  
18 you know, how you see them playing into -- through the  
19 report of EA, I guess, playing into what may happen in  
20 the water licencing process down the road?

21 THE CHAIRPERSON: Thank you, Mr.  
22 Donihee. To the Tlicho government.

23

24 (BRIEF PAUSE)

25

1 DR. GINGER GIBSON: Masi, Mr. Donihee  
2 for your questions. Ginger Gibson for the Tlicho  
3 Government.

4 We are looking for the -- the five (5)  
5 recommendations we have made to be followed through as  
6 measures in the report of the Environmental Assessment.

7 We believe that we -- we're aware that  
8 the Land and Water Board has policy on -- on this  
9 issue, and -- and we're trying to be helpful upstream  
10 on this question, having been asked to be helpful  
11 upstream on this question.

12 And -- and so, we believe that these  
13 measures will be instructive in the Land and Water  
14 Board process, especially because parties are  
15 discussing the question of "substantially unaltered"  
16 and what that -- and what that means.

17 And so, I think clarity on that concept  
18 will be instructive. Mas -- Masi.

19 THE CHAIRPERSON: Thank you. We'll go  
20 back to the Review Board staff.

21 MR. JOHN DONIHEE: Thank you, Mr.  
22 Chairman. John Donihee. Just -- just one (1) follow-  
23 up then. I asked this question of Mr. Jenkins; I'd  
24 like to ask it of you as well.

25 Is it fair then to say that the Tlicho

1 government's view is that if these recommendations are  
2 not -- don't -- don't show up in the report of EA as  
3 measures, that -- that there would be a sig --  
4 significant impacts on the things that are of value  
5 about this area and this ecosystem from the standpoint  
6 of the Tlicho people?

7 THE CHAIRPERSON: Thank you, Mr.  
8 Donihee. We'll go to the Tlicho government.

9  
10 (BRIEF PAUSE)

11  
12 DR. GINGER GIBSON: Masi, Mr. Donihee.  
13 Ginger Gibson, Tlicho government.

14 Firstly, the process isn't complete, so  
15 there's several elements to the process not being  
16 complete. We're only in the public hearing stage.

17 The traditional knowledge report is not  
18 released, and we will be looking at everything in its  
19 totality to make our own estimations of -- of  
20 significance. And -- and -- and I think when it comes  
21 to the traditional knowledge report being issued, we  
22 will be looking back at the estimations of significance  
23 to revisit them.

24 But we will be looking to the Review  
25 Board -- we'll be looking to the Review Board for

1 guidance on this question as well. So, we'll be  
2 looking, ourselves, at the full record in order to make  
3 some determinations on this question.

4 But the measures are significant for the  
5 Tlicho government to include -- it's significant to  
6 include them in the measure, in the report of  
7 environmental assessment, to be protective. And -- and  
8 we will revisit that question when we look at  
9 everything in its totality.

10 THE CHAIRPERSON: Thank you. I'm going  
11 to go back to Mr. Donihee.

12 MR. JOHN DONIHEE: Thank you, Mr.  
13 Chairman. Those are my questions.

14 THE CHAIRPERSON: Okay, thank you.  
15 Before I go to the Board members to my left -- and this  
16 time I'm going to go that way -- I just wanted to  
17 recognize Peter Liske in the back, Former Chief of the  
18 N'Dilo Detah in the back. I also go to Board members  
19 now, to my left. I want to go to Percy Hardisty.

20 MR. PERCY HARDISTY: Masi, Mr. Chair.  
21 I don't have any questions.

22 THE CHAIRPERSON: Okay, thank you.  
23 Board member Rachel Crapeau?

24 MS. RACHEL CRAPEAU: Thank you. Are  
25 you hoping that there will be an independent monitoring

1 agency for this project? Yes or no. Thank you.

2 THE CHAIRPERSON: Okay, thank you.

3 Tlicho Government?

4 DR. GINGER GIBSON: Ginger Gibson,  
5 Tlicho Government. Yes, we are hoping there will be an  
6 independent agency -- monitoring agency for this  
7 proposed development. Masi.

8 THE CHAIRPERSON: Thank you. Board  
9 member Rachel Crapeau?

10 MS. RACHEL CRAPEAU: No more questions.  
11 Thank you.

12 THE CHAIRPERSON: Thank you. Board  
13 member Danny Bayha?

14 MR. DANNY BAYHA: Thank you, Mr. Chair.  
15 Danny Bayha, Review Board. Thank you for this  
16 presentation, Ginger, and thank you to the Elders for -  
17 - for the presentation. On the question of -- I think  
18 earlier the question from Board member Rachel Crapeau  
19 asked about the independent monitoring agency again. I  
20 would think if -- maybe if -- maybe what your initial  
21 thoughts about having this agency be part of this  
22 development.

23 Is it going to be -- what initial  
24 thoughts that's -- is it going to be part of how things  
25 are -- for the diamond mines, they're going to be

1 something that could be worked off there? Or, is it  
2 something that you think it would be totally separate,  
3 or -- so maybe I just thought maybe if -- if the --  
4 someone could probably can enlighten us on that? Thank  
5 you.

6 THE CHAIRPERSON: Thank you, Mr. Bayha.  
7 Move to the Tlicho Government.

8

9 (BRIEF PAUSE)

10

11 DR. GINGER GIBSON: Masi, Mr. Bayha,  
12 for the question. Ginger Gibson, Tlicho Government.  
13 The Giant Mine process is yielding some very useful  
14 data on this question. Some months ago, maybe a year  
15 ago now, Dr. Natasha Affolder provided a document to  
16 that process, evaluating all of the independent  
17 monitoring bodies in the -- including all of the  
18 diamond mine bodies, but as well including other across  
19 the country -- other agencies across the country.

20 So I think that's a really useful  
21 document to provide, and it has provided us guidance  
22 and has provided us really useful insights in how to  
23 move forward ourselves in the question of independence.  
24 We'll be -- we'll be looking at those questions for  
25 this process.

1                   One (1) of the Chiefs mentioned  
2 yesterday -- there -- there's so many mitigation pieces  
3 to this to pull together, so it's going to need to be  
4 creative and adaptive. One of the Chiefs mentioned  
5 yesterday, as an example, this area, (NATIVE LANGUAGE  
6 SPOKEN) is so fundamental to Tlicho people. It is the  
7 heart of Tlicho lands. And it is the identity, it is  
8 the -- the body of Tlicho lands.

9                   And so it is so vital and so important  
10 to Tlicho people that one (1) of the Tlicho Chiefs  
11 mentioned yesterday that the mechanisms such as have  
12 been experienced in Voisey's Bay independent  
13 monitoring, such as the right to shut down operations  
14 if contamination is being perceived or be -- or being  
15 experienced, until it is rectified. So very strong  
16 powers through an independent monitoring to assure that  
17 traditional owners and -- and First Nations have very  
18 strong powers and strong confidence in the  
19 environmental monitoring that is going on.

20                   So we will be looking to that document  
21 that I -- I mentioned and we'll provide to the public  
22 record. It's on the Review Board site, but we'll --  
23 we'll provide a link to it again. And -- and we do  
24 believe that it is something that will require diligent  
25 work between the parties. Masi.



1 THE CHAIRPERSON: Thank you. We'll go  
2 back to Board member Danny Bayha.

3 MR. DANNY BAYHA: Thank you, Mr. Chair.  
4 And thank you for that response, Ginger. And -- and  
5 just a final -- final question: Earlier, there was a  
6 mention that you will be undertaking some risk  
7 assessment of your own, and I imagine that would be  
8 including this type of an agency to -- to -- in your --  
9 in your report.

10 So I was just asking if that would be  
11 happening? Thank you.

12 THE CHAIRPERSON: Thank you, Mr. Bayha.  
13 I'm going to go to the Tlicho Government.

14 DR. GINGER GIBSON: Thank you for the  
15 question. Ginger Gibson, Tlicho Government. The --  
16 the technical risk assessment, we went through a  
17 process ourselves of -- of going through a technical  
18 risk assessment. So we brought together reports from a  
19 variety of experts that informed our own internal  
20 process, and we spent -- all of us spent a day and a  
21 half together sitting, going through every single  
22 element that we considered to be important on this  
23 proposed mine, and giving our own risk rating to that  
24 element.

25 And so we provided -- we looked at

1 socioeconomic issues, and then we judged the risk with  
2 the information that was available at the time. We  
3 judged the risks ourselves for the Tlicho Government.

4                   We did that with economics of the mine  
5 as well. We looked at how much time it'll take, for  
6 example, for the -- the company to move towards -- to  
7 actually start up their mineral processing and looked  
8 at that length of time being something over the  
9 eighteen (18) months, and how that could impact on the  
10 financial viability of this mine.

11                   We looked at caribou issues, we looked  
12 at closure, and we looked at mine -- major mine  
13 components. We had a briefing from our technical  
14 experts on each of those issues and then developed our  
15 own risk judgment, which is a technical report that we  
16 submitted to the Review Board for your consideration.

17                   I want to mention that as new  
18 information becomes available, those judgments, of  
19 course, will change as we yield new information about  
20 wetlands, as we get new information on closure --  
21 closure. But in the opening comments of the Chief this  
22 morning, Chief Daniels mentioned that we did give both  
23 socioeconomic issues and closure the highest risk  
24 ratings -- unacceptable risks -- for the Tlicho  
25 Government at that point. But I -- I want to mention,

1 of course, new information is always coming in, and  
2 these things change with time. Masi.

3 THE CHAIRPERSON: Okay. Thank you.  
4 Board member Danny Bayha?

5 MR. DANNY BAYHA: Yes, I have one (1)  
6 final question to follow up onto this. Thank you,  
7 Ginger. The -- typically, when we're talking about  
8 independent monitoring agencies, we always think about  
9 physical sciences and physical -- that type of thing.

10 And would you foresee that this  
11 monitoring agency, if it does become a reality, would  
12 include the socioeconomic impacts monitoring as well?  
13 Thank you.

14 THE CHAIRPERSON: Thank you, Mr. Bayha.  
15 Tlicho Government...?

16 DR. GINGER GIBSON: The -- the short  
17 answer to that -- sorry. Ginger Gibson, Tlicho  
18 Government. The short answer is yes, and we hope to  
19 give you some -- some thoughts on that on Friday when  
20 we speak about socioeconomic issues.

21 THE CHAIRPERSON: Thank you. Mr.  
22 Bayha, that was your final question?

23 MR. DANNY BAYHA: Yes, thank you, Mr.  
24 Chair.

25 THE CHAIRPERSON: Okay. Thank you, Mr.

1 Bayha. I'm going to go to Mr. Richard Mercredi.

2 MR. RICHARD MERCREDI: Thank you, Mr.  
3 Chair, and also thanks to the Tlicho Government for  
4 their report, but I have no questions at this time.  
5 Thank you.

6 THE CHAIRPERSON: Thank you, Mr.  
7 Mercredi. I'm going to go to Board member James Wah-  
8 Shee.

9 MR. JAMES WAH-SHEE: Thank you, Mr.  
10 Chair. I just want to thank the -- the Tlicho  
11 Government and the Elders for their presentation and  
12 giving us their views about the important aspects that  
13 might impact the people, their way of life, and so  
14 forth. So I'd just like to thank the people for the  
15 presentation, and I don't have any questions at this  
16 time. Thank you.

17 THE CHAIRPERSON: Thank you, Mr. Wah-  
18 Shee. I'm going to go to Board member John Curran.

19 MR. JOHN CURRAN: Thank you, Mr.  
20 Chairperson. I'd also like to thank Mr. Louie Zoe for  
21 taking time to share his traditional knowledge with us  
22 today, and look forward to hearing more on Friday.

23 One (1) -- one (1) question, following  
24 up on a fellow Board member's earlier questions. What  
25 do you envision the composition of this monitoring

1 group to be? Thank you.

2 THE CHAIRPERSON: Thank you. I'm going  
3 to go to the Tlicho Government.

4

5 (BRIEF PAUSE)

6

7 DR. GINGER GIBSON: Thank you for your  
8 question. And we will provide guidance on this in our  
9 final presentation.

10 THE CHAIRPERSON: Thank you. Mr. John  
11 Curran, any further questions?

12 MR. JOHN CURRAN: Nothing further at  
13 this time, Mr. Chair.

14 THE CHAIRPERSON: Okay, thank --

15

16 (POWER OUTAGE)

17

18 --- Upon recessing at 4:07 p.m.

19 --- Upon resuming at 7:06 p.m.

20

21 THE CHAIRPERSON: Okay. We'll  
22 continue on. I'd like to call the public hearing back  
23 to order. It's now six (6) minutes after 7:00. We'll  
24 continue on with the agenda. We still have some work  
25 to do here yet, so we'll -- we'll continue on.

1                   So next is Environment Canada. If they  
2 could -- I believe they're already set up, so they --  
3 we'll -- we'll go ahead, and if somebody could dim the  
4 lights.

5

6 WATER QUALITY, OPERATIONS, AND CLOSURE PRESENTATION BY  
7 ENVIRONMENT CANADA:

8                   MR. CAREY OGILVIE: Thank you, Mr.  
9 Chairman. Carey Ogilvie with Environment Canada. Sary  
10 -- Sarah-Lacey McMillian beside me and Scott Drake,  
11 legal counsel. So thanks very much for the opportunity  
12 to present.

13                   Effluent management and wastewater is,  
14 in general, a concern to Environment Canada. During  
15 the environmental assessment, Fortune Minerals  
16 redesigned its management approach to waste and  
17 wastewater from what was originally proposed at the  
18 outset.

19                   Environment Canada commends the  
20 Proponent on proactive planning with respect to mining  
21 waste management and the resultant mitigation of  
22 potential effects. The commitment to use the reverse  
23 osmosis treatment system in particular will  
24 significantly improve effluent quality. As a result,  
25 it will minimize changes to the water quality in

1 receiving environment.

2

3 (BRIEF PAUSE)

4

5 MR. CAREY OGILVIE: As you heard,  
6 Fortune -- Fortune Minerals has proposed site-specific  
7 water quality objectives for the protection of the  
8 receiving environment. Fortune followed the  
9 toxicology-based approach, with the goal stated as  
10 follows:

11 "To be protective of the most  
12 sensitive species in the most  
13 sensitive life stages over the --  
14 over the infinite period of  
15 exposure."

16 While 'E' -- while Environment Canada  
17 supports that stated goal, we do not necessarily agree  
18 with the proposed site-specific water quality values.  
19 Many site-specific water quality objectives that were  
20 arrived at by Fortune are above levels that maybe best  
21 serve the protection and uses of the downstream  
22 receiving environment.

23 As such, Environment Canada has concerns  
24 with the site-specific water quality objectives, and  
25 specifically with the derivation of aluminum, ammonia,

1 nitrate, chloride, and sulfate.

2                   With reverse osmosis treatment, the  
3 project can be expected to meet much lower water  
4 quality objectives. The current proposed objectives do  
5 not reflect the high level of revose -- reverse os --  
6 osmosis treatment that could be achieved.

7                   We can ex -- anticipate the effluent  
8 quality to be good enough to set lower water quality  
9 objectives. So as such, Environment Canada recommends  
10 to the Board that the currently proposed site-specific  
11 water quality objectives not be used as the basis for  
12 assessing receiving water impacts, nor to developing  
13 effluent quality criteria.

14                  Environment Canada is of the opinion  
15 that the deferring further discussions of site-specific  
16 water quality objectives to the reguluar -- regulatory  
17 stage would not compromise the assessment of discharge-  
18 related potential impacts, provided the proposed  
19 treatment system is implemented and mitigation  
20 commitments go forward and are reflected in the Board's  
21 environmental assessment decision report.

22                  Envir -- sorry, Fortune has agreed with  
23 Environment Canada's recommendations and this is  
24 identified in Fortune's technical report  
25 recommendations and responses document that's posted on



1 the public registry.

2 And finally, Environment Canada does not  
3 necessarily disagree with AANDC's proposed approach to  
4 taking qualitative or narrative objectives forward in  
5 the EA. Both departments want protective objectives.  
6 So, thank you.

7 THE CHAIRPERSON: That's your  
8 presentation? Thank you. Will you turn the power on  
9 again, please?

10

11 (BRIEF PAUSE)

12

13 QUESTION PERIOD:

14 THE CHAIRPERSON: Thank you. Okay.  
15 We'll go into questions now. I'll work my way up.

16 Questions from Natural Resources Canada  
17 in regards to Environment Canada's presentation?

18 MR. JOHN KING: John King, Natural  
19 Resources Canada. We have no questions. Thank you.

20 THE CHAIRPERSON: Thank you. I'm  
21 going to go to Transport Canada.

22 MR. DALE KIRKLAND: Dale Kirkland,  
23 Transport Canada. No questions. Thank you, Chairman.

24 THE CHAIRPERSON: Thank you. I'm  
25 going to go to Aboriginal Affairs and Northern

1 Development, AANDC.

2 MR. NATHAN RICHEA: Thank you, Mr.  
3 Chair. It's Nathan Richea with the Water Resources  
4 Division, Aboriginal Affairs. We have no questions.

5 THE CHAIRPERSON: Thank you. I'm  
6 going to go on to Fisheries and Oceans Canada.

7 MS. SARAH OLIVIER: Sarah Olivier with  
8 Fisheries and Oceans. We have no questions.

9 THE CHAIRPERSON: Thank you. I'm  
10 going to go to the North Slave Metis Alliance.

11 MS. SUSAN ENGE: No questions. Thank  
12 you.

13 THE CHAIRPERSON: Thank you. I'm  
14 going to go to the Yellowknives Dene First Nation,  
15 YKDFN. I'll continue on with Tlicho Government.

16 DR. GINGER GIBSON: Tlicho Government,  
17 no questions.

18 THE CHAIRPERSON: Thank you. Fortune  
19 Minerals Limited, questions to the presentation?

20 DR. RICK SCHRYER: Rick Schryer,  
21 Fortune Minerals Limited. I'd just like to -- we have  
22 one (1) comment to make on the presentation, and it'll  
23 be given by Rein Jaagumagi of Golder Associates.

24 MR. REIN JAAGUMAGI: Is this on? Yes.  
25 Rein Jaagumagi, Golder Associates. I would just like

1 to note that in the presentation there was a list of  
2 parameters that has now been superceded by the revised  
3 closure memo that was submitted to the Board and that  
4 many of the substances that are listed on there are no  
5 longer considered as contaminants of potential concern.

6 THE CHAIRPERSON: Okay. Thank you.  
7 Environment Canada, did you want to respond to that?

8 MR. CAREY OGILVIE: Thanks, Mr.  
9 Chairman. Yes, unfortunately we haven't had -- we're a  
10 little bit low on capacity and we haven't had an  
11 opportunity to go through that -- the most recent  
12 information that's been filed. So that -- that's --  
13 the update is duly noted. Thank you.

14 THE CHAIRPERSON: Okay. Thank you.  
15 Fortune Minerals, no further questions? Thank you.  
16 I'm going to go to the Review Board staff.

17 DR. KATHY RACHER: Hi, Kathy Racher  
18 here. We have no questions.

19 THE CHAIRPERSON: Okay. Thank you.  
20 I'm going to go to my right, Mr. John Curran.

21 MR. JOHN CURRAN: Thank you, Mr.  
22 Chairman. John Curran with the Review Board. No  
23 questions at this time.

24 THE CHAIRPERSON: Thank you. Mr.  
25 James Wah-shee...?

1 MR. JAMES WAH-SHEE: Thank you, Mr.

2 Chair. I -- I have no questions. Thank you.

3 THE CHAIRPERSON: Thank you. Mr.

4 Richard Mercredi...?

5 MR. RICHARD MERCREDI: Thank you, Mr.

6 Chair. No questions at this time.

7 THE CHAIRPERSON: Thank you. Mr.

8 Danny Bayha...?

9 MR. DANNY BAYHA: Just -- thank you,

10 Mr. Chair. I just had a question; more of a

11 clarification, I suppose. On your last page of your

12 presentation you mentioned that the proposed treatment

13 system and mitigation commitments go forward.

14 Are you met -- you're thinking about the

15 whole operation, including closure and -- and

16 reclamation side of this whole thing -- of this

17 program? Thank you.

18 THE CHAIRPERSON: Thank you.

19 Environment Canada...?

20 MR. CAREY OGILVIE: Thank -- thank you,

21 Mr. Chairman. No, these -- those comments are specific

22 to operations, so we haven't had a chance to go through

23 the closure information.

24 THE CHAIRPERSON: Thank you. Mr.

25 Bayha...?

1 MR. DANNY BAYHA: Than -- thank you,  
2 Mr. Chair. So I imagine you will be undertaking that  
3 later on as this -- this process goes along.

4 Is -- is that something that'll be  
5 happening later on? Thank you, Mr. Chair.

6 THE CHAIRPERSON: Thank you.  
7 Environment Canada...?

8

9 (BRIEF PAUSE)

10

11 MR. CAREY OGILVIE: Thanks, Mr.  
12 Chairman. We will do our best ability to -- to review  
13 that material within the timelines available.

14 THE CHAIRPERSON: Thank you. Mr.  
15 Bayha...?

16 MR. DANNY BAYHA: I -- that -- that's  
17 all I had. Thank you.

18 THE CHAIRPERSON: Thank you. I'm  
19 going to go to Rachel Crapeau, Board member.

20 MS. RACHEL CRAPEAU: Thank you, Mr.  
21 Chair. I have no questions at this moment.

22 THE CHAIRPERSON: Thank you. Percy  
23 Hardisty, Board member...?

24 MR. PERCY HARDISTY: Masi, Mr. Chair.  
25 I don't have any questions at this moment.

1 THE CHAIRPERSON: Okay. Thank you.  
2 I'm going to thank Environment Canada for your  
3 presentation. Masi. Continue on, next I have is  
4 Natural Resources Canada. If you could come up and set  
5 up your -- set up for your -- for your presentation.

6

7 (BRIEF PAUSE)

8

9 WATER QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
10 NATURAL RESOURCES CANADA:

11 MR. JOHN KING: Thank you, Mr.  
12 Chairperson and Board members. Our presentation is on  
13 -- it's -- sorry, I -- my name is John King, I'm an EA  
14 coordinator with Natural Resources Canada, also known  
15 as NRCan.

16 This presentation is on hydrogeology and  
17 geotechnical aspects of our technical review. Next  
18 slide, please.

19

20 (BRIEF PAUSE)

21

22 MR. JOHN KING: I'll get -- this is my  
23 first tech -- my first Board hearing. This  
24 presentation -- sorry, we'll get to the next slide  
25 there.

1 (BRIEF PAUSE)

2

3 MR. JOHN KING: Okay. This  
4 presentation provides a summary of NRCan's technical  
5 review relevant to water quality for the proposed Nico  
6 Project. As mentioned earlier today, experts who  
7 undertook the review could not be present at the public  
8 hearings.

9 NRCan will respond to questions  
10 pertaining to our -- our review in writing, if  
11 necessary. NRCan's technical review submitted to the  
12 Board in June 2012 outlined a number of  
13 recommendations. These are summarized on pages 27 to  
14 30 of our technical report.

15 NRCan met with the Proponent on July  
16 26th to discuss our recommendations, or many of our  
17 recommendations. And this -- the meeting was productive  
18 and Fortune provided meeting minutes on August 15th and  
19 written responses on August 22nd.

20 ` Next slide, please. Next slide. Oh,  
21 sorry. Okay. These -- these reading glasses are --  
22 are just -- actually, I broke them today, so this is  
23 really -- feels very goofy. So -- can you hold these  
24 for me? Okay. That's okay. Costco, three (3) pairs  
25 for twenty dollars (\$20). And up here, they're thirty-

1 five (35) a pair. I think I can wait. No. We all  
2 need a bit of comic relief.

3 Why is this important, hydrogeology and  
4 groundwater quality -- sorry, quantity, that's  
5 quantities, intentionally. Adequate information on  
6 hydrogeology and groundwater flow is required to  
7 determine the impact of mining activities, such as mine  
8 dewatering and seepage from mine waste on groundwater  
9 quantity and quality.

10 Next slide, please. NRCan views: In  
11 NRCan's view Fortune -- Fortune's field  
12 characterization and numerical groundwater flow  
13 modelling is well done, providing quantitative value  
14 such as water budgets and pumping rates throughout the  
15 mine's life and after closure.

16 NRCan recommended in our technical  
17 review that Fortune provide more explanation of how  
18 they chose parameters and values in order to  
19 characterize the groundwater flow regime and assess the  
20 potential impacts to water.

21 For example, relating to ground -- the  
22 groundwater flow model, NRCan requested clarification  
23 of how hydraulic conductivities for several layers of  
24 the conceptual model were selected.

25 NRCan also requested information on the



1 expected hydraulic conductivity value for the thick --  
2 thickened tailings and information on expected  
3 groundwater flow through the co-disposal facility.

4 Fortune has provided information  
5 describing the rationale for their parameters, and  
6 NRCAN has reviewed these responses and is satisfied  
7 with Fortune -- Fortune's rationale and explanations.

8 I -- I'll just note that on -- on the  
9 slide that I had there for NRCAN views, I mentioned a  
10 date, August 18th, in the third bullet. At that point  
11 what we had received was a written response, which was  
12 a draft and we had a -- we had a -- we wanted a bit  
13 more explanation on it, and hence we have a -- the  
14 August 22nd version. And that is on the -- the  
15 MVEIRB's public registry.

16 Next slide. Okay. Geotechnical  
17 engineering, stability and performance of the CDF. Why  
18 is this important? Maintenance of -- maintenance of  
19 stability and integrity of the co-disposal facility is  
20 important to ensure containment of contaminants and to  
21 minimize the impacts on water quality.

22 Stability of the co-di -- co-disposal  
23 facility is dependant on geotechnical properties of  
24 earth materials and of tailings and waste rock. Earth  
25 materials here is -- is the soil, the rocks, bedrock,

1 as well as water and ice and anything else that is  
2 natural in the -- in the earth.

3 Okay. Next slide, please. NRCan views:  
4 In our technical report NRCan agreed with Fortune that  
5 impacts related to seepage from the CDF can be  
6 minimized with appropriate design and an effective  
7 monitoring and management plan.

8 Recognizing that design of the CDF is at  
9 a preliminary design level, NRCan made recommendations  
10 for its detailed and final design. For example, this  
11 included that Fortune:

12 A) conduct further geotechnical inve --  
13 investigations to improve the characterization of  
14 foundation materials and to support the detailed  
15 design;

16 B) refine the seepage and stability  
17 analysis incorporating the new information from  
18 detailed geotechnical investigations and include  
19 updated creep analysis and consideration of effects  
20 related to the possible presence of frozen and unfrozen  
21 layers within the pile;

22 C) and that Fortune follow through on  
23 commitments to develop an effective CDF monitoring and  
24 management plan which includes installation of  
25 instrumentation such a pies -- piezometers, slope

1 inclinometers, settlement plates, and thermistors.

2 Fortune has agreed to NRCan's  
3 recommendations and NRCan is satisfied with Fortune's  
4 commitments and explanations.

5 In closing, NRCan is willing to respond  
6 to any questions regarding our technical review. Masi.

7

8 QUESTION PERIOD:

9 THE CHAIRPERSON: Thank you. Can I get  
10 the lights on again? Thank you for your presentation.  
11 I'm going to go to questions to your presentation now.

12 I'm going to go from the top from  
13 Fortune Minerals Limited, questions for Natural  
14 Resources Canada.

15 DR. RICK SCHRYER: Rick Schryer,  
16 Fortune Minerals. No questions, thank you.

17 THE CHAIRPERSON: Thank you. Then I'll  
18 go to the Tlicho Government.

19 DR. GINGER GIBSON: Masi, Mr. Chair.  
20 Ginger Gibson with Tlicho Government. I'm wondering --  
21 I have one (1) question.

22 I'm wondering if you can give us your  
23 views on -- on what you would think of -- there's --  
24 there's a number of new design elements or new  
25 technologies being proposed, and you've very usefully

1 reviewed in your -- in your meetings and in the minutes  
2 of the meetings and -- and in your -- your -- your  
3 presentation here, the performance of the co-disposal  
4 facility.

5 We are wondering what your views are on  
6 an independent engineering or geotechnical -- a panel  
7 of engineers and -- and specialists who have -- who can  
8 provide peer review on the operational years, at least  
9 the first few, if not all of the operational years, to  
10 provide kind of guidance and feedback on the two (2) --  
11 and here you're only referring to the co-disposal  
12 facility, later, we'll be referring to both  
13 technologies -- just to provide feedback on the  
14 performance of the new technologies. Masi.

15 THE CHAIRPERSON: Thank you. I'm going  
16 to go to Natural Resources Canada.

17 MR. JOHN KING: John King, Natural  
18 Resources Canada. Ginger, could I get clarification on  
19 what specific technologies you're referring to? Thank  
20 you.

21 DR. GINGER GIBSON: The co-disposal  
22 facility and wetlands technologies.

23 THE CHAIRPERSON: Thank you. Natural  
24 Resources Canada.

25

1 (BRIEF PAUSE)

2

3 MR. JOHN KING: John King, Natural  
4 Resources, Canada. We -- we would not have any  
5 difficulty with additional information being provided  
6 for the purpose of monitoring those -- those aspects of  
7 the -- of the project.

8 And if -- if helpful, NRCan could  
9 provide assistance in that area as well with -- with  
10 expertise that we -- if we have expertise available in  
11 those areas, we would -- we would provide some  
12 assistance with that. Thank you.

13 THE CHAIRPERSON: No more questions?  
14 Okay. Thank you. I'm going to continue on.

15 Next I have is the Yellowknives Dene  
16 First Nation.

17 Can we hear Akaitcho IMA Office?  
18 Nobody?

19 North Slave Metis Alliance, any  
20 questions?

21 MS. SUSAN ENGE: Susan Enge, no  
22 questions at this point. Thank you.

23 THE CHAIRPERSON: Thank you.  
24 Government -- sorry -- Fisheries and Oceans Canada...?

25 MS. SARAH OLIVIER: Sarah Olivier with

1 Fisheries and Oceans. No questions, Mr. Chair.

2 THE CHAIRPERSON: Thank you.

3 Government Northwest Territories...?

4 MS. AILEEN STEVENS: He, Aileen  
5 Stevens, ENR. No questions, thanks.

6 THE CHAIRPERSON: Thank you.

7 Aboriginal Affairs and Northern Development Canada,  
8 AANDC...?

9 MR. NATHAN RICHEA: Thank you, Mr.  
10 Chair. It's Nathan Richea with the Water Resources  
11 Division, Aboriginal Affairs. We have no questions.

12 THE CHAIRPERSON: Thank you.  
13 Environment Canada...?

14 MR. CAREY OGILVIE: Thank you, Mr.  
15 Chairman. Carey Ogilvie, Environment Canada. No  
16 questions.

17 THE CHAIRPERSON: Thank you. Transport  
18 Canada...?

19 MR. DALE KIRKLAND: Dale Kirkland,  
20 Transport Canada. No questions, Mr. Chair.

21 THE CHAIRPERSON: Okay, I'm going to go  
22 to the Review Board staff.

23 DR. KATHY RACHER: Hi, Kathy Racher for  
24 the Board. I just have one (1) question.

25 You said that you -- you -- you had a

1 number of questions in your technical report and you  
2 met with Fortune since then, and you say that Fortune  
3 agreed to your recommendations regarding stability  
4 analysis and committed to further geo-technical  
5 investigations to refine steep -- seepage stability  
6 analysis and to support detailed final design.

7 And you're satisfied with their  
8 commitments. And I -- I guess I just wanted to  
9 clarify, for the record, that these are commitments  
10 that could be -- these things you need to know before  
11 the EA is finished to determine significance, or is  
12 this something that can be just done as part of the  
13 water licensing phase, you know, later on after the EA?

14 THE CHAIRPERSON: Thank you. Natural  
15 Resources Canada...?

16 MR. JOHN KING: John King, Natural  
17 Resources Canada. This is information that can be  
18 generated during the -- the water licensing component  
19 of the project. Thank you.

20 THE CHAIRPERSON: Any further  
21 questions? None. Okay. Thank you.

22 I'm going to go to the Review Board  
23 members to my left, I'm going to go to Mr. Percy  
24 Hardisty.

25 MR. PERCY HARDISTY: No questions, Mr.

1 Chair.

2 THE CHAIRPERSON: Ms. Rachel

3 Crapeau...?

4 MS. RACHEL CRAPEAU: No questions at  
5 the moment, Mr. Chair.

6 THE CHAIRPERSON: Thank you. Mr.  
7 Bayha...?

8 MR. DANNY BAYHA: No questions. Thank  
9 you for the presentation.

10 THE CHAIRPERSON: Thank you. Mr.  
11 Richard Mercredi...?

12 MR. RICHARD MERCREDI: No questions,  
13 Mr. Chairman. Thank you.

14 THE CHAIRPERSON: Mr. James Wah-  
15 shee...?

16 MR. JAMES WAH-SHEE: Mr. Chair, I have  
17 no questions. Thank you.

18 THE CHAIRPERSON: Mr. John Curran...?

19 MR. JOHN CURRAN: Thank you, Mr.  
20 Chairman. No questions at this time.

21 THE CHAIRPERSON: Thank you. I want  
22 to thank the Fisheries and -- sorry, Natural Resources  
23 Canada for your presentation. Masi. Next I have is  
24 Fisheries and Oceans Canada.

25



1 (BRIEF PAUSE)

2

3 WATER QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
4 DEPARTMENT OF FISHERIES AND OCEANS CANADA:

5 MS. BEV ROSS: Okay. Good evening, Mr.  
6 Chair, and, Board members. My name is Bev Ross. I'm  
7 with the Department of Fisheries and Oceans. I'm their  
8 Regional Manager for Environment Assessment.

9 Immediate to my -- immediately to my  
10 left is Rick Walbourne, who's a fish habitat biologist  
11 and beside him is Sarah Olivier, who's an Environment  
12 Assessment analyst with DFO.

13 We're going to focus our comments here  
14 on the physical impacts to fish and fish habitat in our  
15 review. There was four (4) main areas that DFO  
16 examined that are noted on the slide there, the grid  
17 ponds, water withdrawal, and associated fish habitat  
18 assessment for both the water intake and the diffuser,  
19 as well as water crossings for the access road, and in  
20 particular the Marian bridge.

21 With respect to our analysis of the grid  
22 ponds, based on the information provided by Fortune in  
23 their fisheries assessment, including details on  
24 connectivity -- the connectivity between different  
25 water bodies, the symmetry which examines the depth and

1 winter under-ice dissolved oxygen in which case the  
2 proponent provided information that indicated that the  
3 under-ice dissolved oxygen was well below that which is  
4 expected to sustain aquatic life.

5 DFO is confident that the grid ponds are  
6 not likely to support fish.

7 With respect to water withdrawal during  
8 operations, the proponent has proposed to withdraw  
9 water from Lou Lake. DFO assessed the volume of water  
10 that the proponent was proposing to withdraw relative  
11 to the volume of water in Lou Lake and determined that  
12 -- and ag -- agreed with the proponent's assessment  
13 that the likelihood of impacts to fish and fish habitat  
14 as a result of this withdrawal was negligible.

15 We do recommend that DFO's protocol for  
16 winter water withdrawal from ice-covered water bodies  
17 in the Northwest Territories and our freshwater intake  
18 end-of-pipe fish screen guidelines be followed.

19 I'm going to -- DFO also had a look at  
20 the closure memo that was submitted by Fortune with  
21 respect to water withdrawals from the Marian River in  
22 respect to their closure proposal.

23 In the closure memo it was stated that  
24 Fortune would utilize no more than 5 percent of the  
25 Marian River flows during open water months between May

1 and October. On previous projects for winter water  
2 withdrawals in streams, DFO has recommended that less  
3 than 10 percent of stream flow withdrawals would not  
4 result in significant impacts to fish and fish habitat.

5 In summary, the use of 5 percent for  
6 withdrawals in conjunction with avoiding under-ice  
7 conditions further reduces the likely -- likelihood of  
8 impacts to fish habitat in the Marian River.

9 DFO also looked at the fish habitat with  
10 respect to the physical impacts of the structures for  
11 water withdrawal and for the diffuser. While there  
12 would be slight changes in habitat near the area of the  
13 diffuser and the outfall, DFO has determined that the  
14 habitat alterations are not likely to be harmful.

15 DFO recommends the development of a  
16 mitigation and monitoring plan for the construction,  
17 operation and decommissioning of the proposed water  
18 intake and diffuser.

19 In summary, Mr. Chair, DFO has concluded  
20 that provided the proponent follows the recommended  
21 guidelines and operational statements and carries out  
22 the project in accordance with the commitments made,  
23 the potential impacts to fish habitat and fish will be  
24 fully mitigated, and DFO does not anticipate the need  
25 for authorization under the Fisheries Act.

1                   Thanks very much for the opportunity to  
2 present this information.

3                   THE CHAIRPERSON:    Thank you.    Just a  
4 quick question before I go to the questions.    If we  
5 could get a copy of your presentation as well, because  
6 I believe it's slightly different from what we have in  
7 the binder, so maybe just an updated version.

8                   MS. BEV ROSS:    Sure, we can do that, Mr.  
9 Chair.

10                  THE CHAIRPERSON:    Thank you.

11                  MS. BEV ROSS:    Bev Ross.

12

13 QUESTION PERIOD:

14                  THE CHAIRPERSON:    Thank you.    Well, I'm  
15 going to go to -- next one on the list here I have for  
16 questions, I want to start off with the Natural  
17 Resources Canada.

18                  Is there any questions for Fisheries and  
19 Oceans Canada?

20                  MR. JOHN KING:    John King, Natural  
21 Resources Canada.    We have no questions, thank you.

22                  THE CHAIRPERSON:    Thank you.    I'm going  
23 to go to Transport Canada.

24                  MR. DALE KIRKLAND:   Dale Kirkland,  
25 Transport Canada.    No questions, Mr. Chair.

1 THE CHAIRPERSON: Thank you. I'm  
2 sorry, Aboriginal Affairs and Northern Development  
3 Canada, AANDC.

4 MR. NATHAN RICHA: Thank you, Mr.  
5 Chair. It's Nathan Richa with the Water Resources  
6 Division, Aboriginal Affairs. We have no questions.

7 THE CHAIRPERSON: Thank you. North  
8 Slave Metis Alliance...? Oh, I'm sorry, hang on a  
9 second. I missed one. Government of Northwest  
10 Territories...?

11 MS. AILEEN STEVENS: Aileen Stevens,  
12 ENR. No questions. Thank you.

13 THE CHAIRPERSON: Thank you. Before I  
14 go to the next one, who's got that reading glasses  
15 here? Government of Northwest Territories...?

16 Oh, sorry, okay, I need the glasses.  
17 North Slave Metis Alliance...?

18 MS. SUSAN ENGE: Just to get  
19 confirmation, I am curious about how you came to the  
20 conclusion that there will not be a negative impact on  
21 freshwater fish, because from what I've seen from your  
22 presentation, the chemicals that are released into the  
23 water at various places will not have a negative  
24 impact.

25 Is that correct?

1 THE CHAIRPERSON: Thank you. I'm  
2 going to go to Fisheries and Oceans Canada.

3 MS. BEV ROSS: DFO did not review the  
4 chemical impacts. Those were reviewed by Environment  
5 Canada and AANDC. So we'll defer to their comments and  
6 presentations. Bev Ross, Fisheries and Oceans Canada.

7 THE CHAIRPERSON: Okay. Thank you.  
8 North Slave Metis Alliance...?

9 MS. SUSAN ENGE: Susan Enge, Metis  
10 Alliance. No further questions.

11 THE CHAIRPERSON: Okay. Thank you.  
12 Akaitcho IMA Office...? Anybody here?

13

14 (BRIEF PAUSE)

15

16 THE CHAIRPERSON: Yellowknives Dene  
17 First Nation, YKDFN? Nobody here?

18

19 (BRIEF PAUSE)

20

21 THE CHAIRPERSON: The Tlicho  
22 Government...?

23 DR. GINGER GIBSON: Masi, Mr. Chair.  
24 Has the Department of Fisheries and Oceans considered  
25 what the new mitigation of supporting active filling of

1 the pit, what that might do with respect to water  
2 withdrawals in the -- in the summer, and -- and have --  
3 have you actually had a chance to look at that new  
4 mitigation and consider what -- the kinds of impacts  
5 that would be associated with it? Masi.

6 THE CHAIRPERSON: Thank you. I'm  
7 going to go to Fisheries and Oceans Canada.

8 MS. BEV ROSS: Bev Ross, Fisheries and  
9 Oceans Canada. We did look at the potential impacts  
10 from a perspective of water quantity and whether the  
11 reduction in water quantity in the Marian River would  
12 be likely to have an impact to fish and fish habitat.

13 Given the low amount of water removal  
14 relative to the total flow in the river during the  
15 summer, we didn't anticipate that there would be a  
16 negative impact to fish habitat. Bev Ross, Fisheries  
17 and Oceans Canada.

18 THE CHAIRPERSON: Thank you. Tlicho  
19 Government...?

20 DR. GINGER GIBSON: Thank you. Ginger  
21 Gibson, Tlicho Government. Do you anticipate doing any  
22 more work on this -- this area given that it may become  
23 a mitigation measure? Masi.

24 THE CHAIRPERSON: Fisheries and Oceans  
25 Canada...?

1 (BRIEF PAUSE)

2

3 MS. BEV ROSS: Bev Ross, Fisheries and  
4 Oceans Canada. Thank you for that question. We may,  
5 in the regulatory phase, request some monitoring be  
6 conducted to confirm the proponent's predictions.

7 THE CHAIRPERSON: Okay. Thank you.  
8 The Tlicho Government...?

9 DR. GINGER GIBSON: No further  
10 questions.

11 THE CHAIRPERSON: Thank you. We'll go  
12 to Fortune Minerals.

13 DR. RICK SCHRYER: Rich Schryer,  
14 Fortune Minerals. No questions at this time. Thank  
15 you.

16 THE CHAIRPERSON: Okay. Thank you. I  
17 want to say thank you to Fisheries and Oceans Canada  
18 for your presentation. Masi. I'm going to go to --  
19 the next one (1) on the list is North Slave Metis  
20 Alliance. Sorry -- oh, I'm sorry.

21 I really -- I must be getting really  
22 tired here. Before I go there, I'm going to go to  
23 staff.

24 MR. BRETT WHEELER: Thank you, Mr.  
25 Chair. It's Brett Wheler for the Board. Just a short



1 question. I just wanted to ask whether DFO recommends  
2 that adherence to 5 percent withdrawal of -- of total  
3 stream flow either in summer and/or in winter be  
4 considered as a -- as a measure of EA?

5 THE CHAIRPERSON: Thank you.  
6 Fisheries and Oceans Canada...?

7 MR. RICK WALBOURNE: Rick Walbourne,  
8 Fisheries and Oceans. We have determined that -- that  
9 we feel that measure is protective enough and -- as it  
10 is being proposed by Fortune.

11 I feel that it could be recommended as a  
12 measure.

13 THE CHAIRPERSON: Okay. Thank you,  
14 YKD. Sorry, the Board staff, Review Board staff?

15 MR. RICK WALBOURNE: Thank you, Mr.  
16 Chair. Nothing further.

17 THE CHAIRPERSON: Okay, and thank you.  
18 To my right, Mr. John Curran...?

19 MR. JOHN CURRAN: Thank you, Mr. Chair.  
20 John Curran with the Review Board. Just one (1) -- one  
21 (1) point of clarification follow-up on the -- on the  
22 last question.

23 You'd mentioned 10 percent would be  
24 acceptable in wintertime. Would that apply to  
25 summertime as well, in general, even though the

1 proponent is saying 5 percent now or are they different  
2 by season?

3 MR. RICK WALBOURNE: Actually, it  
4 should be more conservative -- sorry, Rick Walbourne  
5 with Fisheries and Oceans. The 10 percent during  
6 winter should be more conservative, however, 10 percent  
7 is actually based on an instantaneous flow rate usually  
8 on a gauge stream.

9 Excuse me. In this case they're  
10 actually using historical data and taking some monthly  
11 medians, so we feel that the 5 percent would be more  
12 protective based on the data that Fortune has at hand.  
13 Thank you.

14 THE CHAIRPERSON: Mr. John Curran, any  
15 further questions?

16 MR. JOHN CURRAN: Nothing fur --  
17 further, Mr. Chairman. Thanks.

18 THE CHAIRPERSON: Thank you. Mr. James  
19 Wah-Shee...?

20 MR. JAMES WAH-SHEE: Thank you, Mr.  
21 Chair. I have no question, thank you.

22 THE CHAIRPERSON: Thank you. Mr.  
23 Richard Murphy...?

24 MR. RICHARD MURPHY: No questions at  
25 this time. Thank you, Mr. Chair.

1 THE CHAIRPERSON: Mr. Danny Bayha...?

2 MR. DANNY BAYHA: Yeah, thank -- thank  
3 you. I just had a question on the -- that includes in  
4 the recommendations, and thank for your presentation.

5 Now the -- when you mentioned that you  
6 would -- you don't see, you know, the very last on your  
7 presentation that the development of mitigation and  
8 monitoring plan, construction operation and  
9 decommission proposed, now this is just for the  
10 diffuser and water intake?

11 What about the rest of the operations  
12 down the line -- maybe enclosure and decommissioning,  
13 that sort of -- have you had a chance to really analyze  
14 it and look at it and come to some conclusion on your  
15 own thoughts about this -- this program? Thank you.

16 THE CHAIRPERSON: Thank you. Fisheries  
17 and Oceans Canada...?

18 MS. BEV ROSS: Fisheries and Oceans --  
19 Bev Ross, Fisheries and Oceans Canada. DFO believes  
20 that they did review all the aspects of the proponents  
21 proposal that could potentially impact fish and fish  
22 habitat.

23 As such, we looked at some aspects of --  
24 of closure and remediation and, in particular, briefly,  
25 the filling of the pit and its impacts on the -- or

1 potential impacts on the Marian River.

2                   There were not, to our knowledge, other  
3 aspects that could potentially impact fish and fish  
4 habitat on closure. Thank you very much.

5                   THE CHAIRPERSON: Thank you. Mr.  
6 Bayha...?

7                   MR. DANNY BAYHA: Yeah, thank you.  
8 Just a final question on this.

9                   Should they find down the line this  
10 walk-away water treatment system that's been a wetland  
11 treatment system that's been proposed, I imagine you  
12 guys would be involved in that should this system is  
13 not working or sometimes it might be affecting fish, as  
14 you guys find out, I would imagine you guys would be  
15 involved somewhere along that line. Thank you.

16                   MS. BEV ROSS: DFO did -- would be  
17 reviewing the proponent's proposals with respects to  
18 physical impacts to fish and fish habitat. So if the  
19 wetland were not performing as predicted, that would be  
20 a subject that Environment Canada might advise on.

21                   If there were other aspects of -- of the  
22 proposed treatment that could impact fish and fish  
23 habitat, then we would review it at that time. Thank  
24 you.

25                   THE CHAIRPERSON: Thank you, Ms. Bev

1 Ross.

2 MS. BEV ROSS: Bev Ross, Fisheries and  
3 Oceans Canada. Thank you.

4 THE CHAIRPERSON: Thank you. Mr. Danny  
5 Bayha...?

6 MR. DANNY BAYHA: Yeah, thank you  
7 again. So, I guess in the process of trying to make  
8 sure things don't fall through the cracks, I imagine  
9 there will be some communication between yourselves  
10 department and Environment Canada to make sure things  
11 are not overlooked.

12 One (1) Department is saying, Well, we -  
13 - I thought you guys were looking after this and  
14 anyhow, we thought that, so I mean, obviously, there's  
15 got to be some sort of a linkage so these things don't  
16 fall through the cracks.

17 I'm just trying to understand what  
18 system is in place to ensure that does not happen.  
19 Thank you, Mr. Chair.

20 THE CHAIRPERSON: Thank you. Fisheries  
21 and Oceans Canada...?

22 MS. BEV ROSS: We do regularly  
23 communicate with our Environment Canada counterpart, so  
24 I agree, we wouldn't want anything to fall through the  
25 cracks. We would expect the Proponent to submit some

1 designs for the -- the physical aspects of their water  
2 withdrawal; so their intake structure, for example. So  
3 that would be one (1) mechanism by which we would  
4 become aware of what the Proponent was planning to do  
5 on closure and would review it with respect to the  
6 potential impacts at that time.

7 Bev Ross, Fisheries and Oceans Canada,  
8 and I believe Rick Walbourne is going to add to that.

9 MR. RICK WALBOURNE: Rick Walbourne,  
10 Fisheries and Oceans. There's also been an  
11 establishment of a, I guess, preliminary working group  
12 at this point of a closure group for Fortune that  
13 Fortune's actually spearheaded with the various  
14 stakeholders on the Wek'eezhii Land and Water board.  
15 So Fisheries and Environment Canada would both be  
16 sitting in that group. So that would be an opportunity  
17 for us to have those discussions.

18 THE CHAIRPERSON: Thank you. Mr.  
19 Bayha...?

20 MR. DANNY BAYHA: Yes. One (1) final  
21 question or -- or a comment, but should -- I mean, just  
22 talk about this independent monitoring agency.

23 Would that be -- that -- would that be  
24 another venue for you guys to participate in this  
25 monitoring if -- that you recommended in some of your -

1 - in your PowerPoint presentation? Thank you.

2 THE CHAIRPERSON: Thank you. Fisheries  
3 and Oceans Canada...?

4 MS. BEV ROSS: DFO would expect that  
5 whatever monitoring is undertaken, is undertaken with  
6 the appropriate level of rigour and -- and doesn't have  
7 a strong opinion on who undertakes that, provided that  
8 it is undertaken, will defer to the recommendations of  
9 the Water Board in that respect and to the Board here  
10 in that respect. Thank you very much. Bev Ross,  
11 Fisheries and Oceans Canada.

12 THE CHAIRPERSON: Thank you. Mr. Danny  
13 Bayha...?

14 MR. DANNY BAYHA: That's all I had.  
15 Thank you, Mr. Chair. Thank you.

16 THE CHAIRPERSON: Thank you. Ms.  
17 Rachel Crapeau...?

18 MS. RACHEL CRAPEAU: The -- the  
19 diffuser, I'm kind of curious about that piece of  
20 technology, because they all don't do the same thing,  
21 do they? Some diffusers just let water out after  
22 water's been treated, back into the environment. And  
23 the treated water is supposed to make sure -- we're  
24 supposed to make sure that it will not seriously affect  
25 fish and the fish's habitat.

1                   How -- how many different types of  
2 diffusers have you looked at to see that this design  
3 that's going to be happening at the mine site will --  
4 will be okay?

5                   THE CHAIRPERSON:    Thank you.   Fisheries  
6 and Oceans Canada....?

7                   MS. BEV ROSS:     Bev Ross, Fisheries and  
8 Oceans Canada.   We would expect the proponent to  
9 examine different diffusers for their design and  
10 efficacy in terms of what the objectives are for  
11 discharging their effluent.   What DFO did do is review  
12 the diffuser that the proponent had arrived at for  
13 potential impacts to fish and fish habitat, and how  
14 they plan to construct it.   And we concluded that there  
15 wouldn't be -- there wouldn't likely to be significant  
16 impacts to fish and fish habitat from the diffuser  
17 structure.

18                  THE CHAIRPERSON:    Thank you.   Ms.  
19 Rachel Crapeau....?

20                  MS. RACHEL CRAPEAU:   Supplementary.   So  
21 you're confident that this piece of technology that's  
22 going to be put in place is not going to fall apart or  
23 break or not going to cause problems later on?   Because  
24 sometimes they -- even the biggest water pipe for  
25 Yellowknife River for us to use for our water intake



1 for our community, some -- it's kind of like gotten old  
2 and broken down, and that's why the Yellowknives Dene  
3 get their water right from the Yellowknife River.

4 I was wondering how good is it going to  
5 be and how long is it going to last?

6 THE CHAIRPERSON: Thank you.  
7 Fisheries and Oceans Canada...?

8 MS. BEV ROSS: Bev Ross, Fisheries and  
9 Oceans Canada. Thanks for that question. It would be  
10 the responsibility of Fortune Minerals to maintain  
11 their equipment in good working order and ensure that  
12 it functions as intended. Thanks very much.

13 THE CHAIRPERSON: Thank you. Ms.  
14 Rachel Crapeau...?

15 MS. RACHEL CRAPEAU: No more questions.  
16 I think I'll -- I'll continue tomorrow and the next  
17 day. Thank you.

18 THE CHAIRPERSON: Thank you. Mr.  
19 Percy Hardisty...?

20 MR. PERCY HARDISTY: Masi, Mr. Chair.  
21 I don't have any questions.

22 THE CHAIRPERSON: Okay. Thank you.  
23 Thank you for your presentation again. And next I have  
24 on the -- the agenda here is the North Slave Metis  
25 Alliance.

1 DR. RICK SCHRYER: Mr. Chairman? Mr.  
2 Chairman, if I could just make -- Rick Schryer, Fortune  
3 Minerals. I'd just like to make two (2) statements  
4 just to clarify a few things that were said.

5 First of all, Fortune Minerals is only  
6 going to be withdrawing water from the open-water  
7 season, not under ice. That was mentioned before, so I  
8 just want to make sure -- make that clear.

9 The second was they were asking about  
10 reporting on wetland performance and whether DFO would  
11 be doing that or not. Fortune Minerals will be  
12 submitting regular reports on the development of our  
13 wetlands, because it's to our advantage to demonstrate  
14 that that technology is working. So there will be  
15 regular reporting in place.

16 THE CHAIRPERSON: Thank you for that  
17 clarification. Masi for your comments. Continue on  
18 with the North Slave Metis Alliance presentation.

19

20 WATER QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
21 NORTH SLAVE METIS ALLIANCE:

22 MR. BILL ENGE: Thank you, Mr.  
23 Chairman. Bill Enge, President of the North Slave  
24 Metis Alliance. Just a minute.

25 THE CHAIRPERSON: Okay. You can go

1 ahead and...

2

3 (BRIEF PAUSE)

4

5 MR. BILL ENGE: Thank you, Mr.

6 Chairman. Thank you for this opportunity to speak on  
7 the issue of water quality and closure.

8 Let me begin by informing the Board that  
9 the North Slave Metis Alliance is in a very frustrating  
10 position. We don't have the capacity to properly  
11 assess projects like the one before the Board today.  
12 Notwithstanding our funding challenges, we do our best  
13 to put our concerns on the record.

14 One of the major problems we've been  
15 dealing with for several years is the lack of Crown  
16 funding to provide us with the money we need to do a  
17 proper assessment of projects of this magnitude and of  
18 this type.

19 The North Slave Metis Alliance is very  
20 concerned that because of the Nico Project, North Slave  
21 Metis Alliance members will be prevented from using  
22 water in a huge number of water bodies including Nico,  
23 Peanut, and Burke Lakes due to contamination from mine  
24 effluent discharges; B) Hislop, Rabbit, Tume  
25 (phonetic), Betty Ray (phonetic), Treasure (phonetic),

1 and Lou Lakes, due to perceived or suspected risks of  
2 contamination; and Marian River, from approximately  
3 Tume Lake to Squirrel (phonetic) Lakes, if not further  
4 downstream, due to real and perceived risks of  
5 contamination.

6                   The Marian River has a very high  
7 heritage value to the North Slave Metis, and any  
8 significant impact on the historic water trail is  
9 considered significant. We emphasize to the Board that  
10 the total area where NSMA members' traditional water  
11 use will be negatively affected is much greater than  
12 Fortune's calculation on the mine footprint.

13                   A significant area will be affected.  
14 This assessment does not even take into account the  
15 negative impacts of water use along the access road and  
16 hypothetical new Tliche road. Furthermore, the degree  
17 of change to water quality proposed by Fortune is  
18 substantial and perpetual. It is also very  
19 significantly cumulative; something I will come back to  
20 in a moment.

21                   I add four (4) points before moving to  
22 NSMA's recommendations.

23                   (1) The North Slave Metis Alliance  
24 submits that the measurement of reduced water quality  
25 must include cultural perceptions and preferences as

1 informed by the traditional knowledge of the North  
2 Slave Metis community and not only biological and  
3 chemical data. Community perception of unnatural  
4 waters, dirty waters or off-limit waters can have a  
5 negative effect on traditional use of water in the  
6 area.

7 NSMA disagrees with the use of toxic --  
8 toxicity levels as default site-specific water quality  
9 objectives. We prefer a 'limits of acceptable change'  
10 framework. The framework should be based upon cultural  
11 preferences as well as toxilological information and  
12 aesthetics. We consider natural pre-impact conditions  
13 as baseline conditions to be default site-specific  
14 water quality objectives, and we assert that any change  
15 from baseline requires justification and consent.

16 The North Slave Metis Alliance disagrees  
17 with Fortune's conclusion that a 60 percent increase in  
18 already high metal concentrations in Marian River is  
19 sig -- is insignificant. For example, the high level  
20 of background variability during open water season  
21 might be explained by a forest fire. An influx of a  
22 contaminants resulting from a one (1) time event should  
23 not be used to set a standard for ongoing discharges  
24 that will last twenty (20) years or more.

25 Data collected during unpredictable acts

1 of God, such as forest fires, should be used in worst  
2 case scenario models, but not used for establishing an  
3 average baseline. Overall contaminant loading and  
4 timing of discharges should also be considered.

5 If there is a natural surge of  
6 contaminants during freshnet (sic), for example, then  
7 discharges should be timed to occur also at freshette.

8 The NSMA is critical of the method  
9 Fortune uses to analyze cumulative effects. Whether or  
10 not contaminants from two (2) projects actually mix  
11 together in one (1) water body is analysis that is too  
12 simplistic. It does not address the increasing number  
13 of impacted water bodies within NSMA's traditional  
14 territory, or the increase in proportion of impacted  
15 versus natural water bodies for each type of water  
16 body.

17 In our opinion, impacted water bodies  
18 should be classified by type of water body and type and  
19 level of impact, and then analyzed according to the  
20 negotiated limits of acceptable char -- change.

21 The use of traditional knowledge is  
22 essential in determining types of lakes, rivers and  
23 wetlands as well as in classifying impact types and  
24 magnitude, and determining acceptable limits of change.

25 There are only a few large navigable and

1 culturally significant rivers in North Slave Metis  
2 Alliance territory. It is important to protect them  
3 for generations to come.

4 With that in mind, the North Slave Metis  
5 Alli -- Alliance recommends the following. Fortune  
6 should be required to:

7 1. Provide an improved cumulative  
8 effects assessment.

9 As I said before, the area affected is  
10 substantial. Fortune should be directed to consider  
11 the number of impacted water bodies in the traditional  
12 territory, as well as the size of the impacted water  
13 bodies and the magnitude of existing and future  
14 impacts. It's not just the NSMA speaking here. The  
15 British Columbia Court of Appeal in the West Moberley  
16 (phonetic) case provided that full information in the  
17 area of concern must be assessed.

18 We also submit that Fortune should also  
19 use traditional knowledge in their cumulative  
20 assessment.

21 2. Negotiate water quality criteria,  
22 including closure criteria, with the North Slave Metis  
23 Alliance and other Aboriginal rights holders, such as  
24 the Tlicho, according to the limits of acceptable  
25 framework. Social, cultural and economic consideration

1 should be considered with respect to substantial  
2 alterations in water quality.

3 3. Fund an independent watchdog agency  
4 with a mandate to monitor community perceptions of  
5 change in quality traditional value of water. This  
6 monitoring would include the performance of traditional  
7 activities using water, such as tea boiling and  
8 tasting, fish netting and tasting, swimming, washing,  
9 canoeing, drinking, and cooking. It should also  
10 monitor aesthetics, such as visual, olfactory and  
11 auditory perceptions, and other cultural values. And  
12 finally;

13 4. Fortune should be required to manage  
14 their discharges to be compatible with the natural flow  
15 pattern of the Marian River.

16 Now, the North Slave Metis Alliance and  
17 I sitting here heard today that there is going to be  
18 serious contaminants that are going to be discharged  
19 from this mine. And where exactly are the contaminants  
20 going to go and how are they going to be contained and  
21 cleaned up?

22 Well, the water flows from the mine site  
23 into the Great Slave Lake, and if those contaminants  
24 make their way into the Great Slave Lake, the North  
25 Slave Metis people and the Yellowknives, along with the



1 Tlicho are all going to be affected by this  
2 contamination. But over here, as everyone can see,  
3 we're right here and the Great Slave Lake is right  
4 here, in our backyard where we've already experienced  
5 contamination from mining.

6                   It was within my lifetime that I can  
7 remember that there was a sign posted down in N'Dilo  
8 that said: Do swim in or drink -- drink this water in  
9 Back Bay because of contaminants that ended up in  
10 there. And here we are looking at our drinking water  
11 and once again being challenged with respect to  
12 contaminants that may be back into our system.

13                   Right now we are seriously concerned  
14 about the contaminant of the arsenic trioxide that's in  
15 the Giant Mine to be entombed in perpetuity, because  
16 nobody can figure out what to do with it.

17                   I've heard today that there's supposed  
18 to be some kind of system set in place to ferret out  
19 the contaminants. One (1) of them is the use of  
20 reverse osmosis. And the last I heard what that does  
21 is kill organisms in the water. That's what they use  
22 in Mexico. In my trips down there I've seen water  
23 bottles that reverse osmosis used to -- to purify the  
24 water. I haven't heard anything about how reverse  
25 osmosis will kill arsenic.

1                   Then I heard that the wetlands that are  
2 being proposed here as a -- a cleaning system isn't  
3 going to be using plants to soak up the contaminants,  
4 but rather organisms in the water are going to eat  
5 them. Well, the last time I checked, every organism  
6 that eats arsenic dies.

7                   And I haven't -- and I -- and for the  
8 life of me, I sat here and I thought long and hard  
9 about where are there natural wetlands in the North  
10 Slave area, and I went so far as to ask a few of the  
11 Elders during the supper break if they can tell me  
12 where natural wetlands exist in this area, on our  
13 traditional lands, and nobody could tell me where there  
14 are any.

15                  So what the proponent here is -- is  
16 telling us is that we're going to set up an artificial  
17 system that isn't naturally in place, and that this is  
18 going to be a walkaway system where they put in an  
19 artificial wetland so that they can fill up the hole  
20 they leave that's going to leach out all kinds of  
21 contaminants and put through an artificial wetland  
22 system that doesn't exist in the natural order of  
23 things.

24                  I would like some kind of assurance. I  
25 would like some scientific proof, I guess as assurance,

1 that there is a water treatment -- a guaranteed water  
2 treatment system that can ensure that those  
3 contaminants are removed from the water system. What I  
4 have heard does not convince me that that in fact is  
5 the case.

6 One (1) of the things that's important  
7 as being an Aboriginal leader, such as myself, is to be  
8 a good steward of the land. And that same  
9 responsibility lies with this Board. For generations  
10 to come, we do not -- we want to make sure that our  
11 generations are not going to be -- have to deal with  
12 the kind of catastrophe we saw at Cincolamc (phonetic)  
13 or at the Giant Mine situation; the remediation plan  
14 they got there that actually is not a solution. It's a  
15 holding pattern. And God help us if the global warming  
16 patterns continue to -- on the trend they are now. Who  
17 knows about that frozen block if it's ever going to  
18 stay in place and whether or not that arsenic trioxide  
19 is going to leak into the system -- into our water  
20 system.

21 So what I heard today does not convince  
22 me that what the proponent, Fortune Minerals, is saying  
23 is enough for this Board to say: Go ahead, experiment  
24 with your -- with the wetlands that doesn't exist in  
25 the natural body. I'd like to know.

1                   Show me where in the geography of this  
2 area where wetlands actually exist in the kind that  
3 they say they're going to put in place that is going to  
4 work in concert with a reverse osmosis system to take  
5 those contaminants out of the water that are going to  
6 go in there.

7                   So with that in mind, I thank you for  
8 this opportunity to present our -- my -- our concerns.

9

10 QUESTION PERIOD:

11                   THE CHAIRPERSON:     Okay. Thank you,  
12 Mr. Bill Enge, for your presentation. And thank you  
13 for staying within the time limits we -- we allotted  
14 for -- for this.

15                   I'm going to continue on with the  
16 questioning of your presentation. And I'm going to go  
17 -- start off with the top of the list, Fortune  
18 Minerals. I'm going to go to Fortune Minerals.

19                   DR. RICK SCHRYER:     Rick Schryer,  
20 Fortune Minerals. Thank you for that presentation,  
21 Bill.

22                   I'm curious, how did you -- how did you  
23 ach -- or get to -- come to the conclusion that there  
24 would be a 60 percent change in water quality in the  
25 Marian River?

1 THE CHAIRPERSON: Thank you. Mr. Bill  
2 Enge...?

3 MR. BILL ENGE: Thank you, Mr.  
4 Chairman. Bill Enge responding. My staff ferreted  
5 that out of the information, I believe, that's on the  
6 public registry.

7 THE CHAIRPERSON: Okay. Thank you.  
8 I'm going to go to Fortune Minerals.

9 DR. RICK SCHRYER: Thank you, Mr.  
10 Chairman. Rick Schryer, Fortune Minerals.

11 When you said you consulted the eld --  
12 the Elders about wetlands in the Northwest Territories,  
13 were you asking them about constructed wetlands or  
14 natural wetlands? Because I was a little confused; I  
15 thought you maybe were going back and forth there.

16 THE CHAIRPERSON: Thank you. Bill  
17 Enge...?

18 MR. BILL ENGE: Thank you, Mr.  
19 Chairman. Bill Enge responding.

20 I'm talking about natural wetlands that  
21 exist in the natural order of things is what I used,  
22 versus the artificial wetlands that you're proposing  
23 could be put in place to cleanse the water.

24 THE CHAIRPERSON: Thank you. Fortune  
25 Minerals...?

1 (BRIEF PAUSE)

2

3 DR. RICK SCHRYER: Rich Schryer,  
4 Fortune Minerals. I just wanted to point out that  
5 there is a current example of a natural wetland that  
6 takes out arsenic - puts grid ponds at the site. We  
7 have data to show that arsenic attenuation is in the  
8 range of 50 percent going through these natural  
9 wetlands.

10 In fact, if you look at the inputs into  
11 Nico Lake, the -- the -- or it starts off at around two  
12 hundred and fifty (250). The water going into Nico  
13 Lake, last -- we measured it about three (3) weeks ago,  
14 the arsenic levels were at 112 micrograms per litre of  
15 arsenic. Keep in mind, our SSWQOs are fifty (50), so  
16 we're actually proposing an SSWQO that's half of what's  
17 actually going into the lake under natural conditions.

18 So there are -- there is an example of a  
19 natural system out there.

20 THE CHAIRPERSON: Thank you. Bill  
21 Enge...?

22 MR. BILL ENGE: Yes, thank you, Mr.  
23 Chairman. Bill Enge responding.

24 I -- I would like some -- the geographic  
25 location of the very system that you're speaking about

1 and I'd like to see the data that confirms that that  
2 system in fact removes arsenic from the water. And I  
3 would like -- also like to know, where is it going and  
4 what are you doing with it.

5 THE CHAIRPERSON: Okay. Thank you.  
6 I'll go to Fortune Minerals for your questioning.

7 DR. RICK SCHRYER: Rick Schryer,  
8 Fortune Minerals. Bill sort of asked us a question.  
9 Do we want to reply, or...?

10 THE CHAIRPERSON: Well, actually, he  
11 did the presentation and we're questioning Bill Enge on  
12 his presentation, so --

13 DR. RICK SCHRYER: Okay. What do you  
14 want to do with his question?

15 THE CHAIRPERSON: -- but if you want  
16 to -- but -- but if you want to respond to that that's  
17 up to you.

18 DR. RICK SCHRYER: Okay. We'll respond  
19 quickly. Rick Schryer, Fortune Minerals.

20 The example of the grid ponds was  
21 detailed in the DAR and in our closure memo which was  
22 submitted to the Board on August 20th of this year. In  
23 terms of where the contaminants go, I'm going to let  
24 Dr. Monique Haakensen answer that question.

25 DR. MONIQUE HAAKENSEN: Dr. Monique

1 Haakensen, Contango Strategies.

2                   Where the contaminants go will -- sorry,  
3 where the contaminants go in the case of arsenic,  
4 arsenic is deposited into the soil or sediment of the  
5 wetland and it is in a mineral form there that is non-  
6 soluble.

7                   THE CHAIRPERSON:     Okay. Thank you.  
8 Before I continue on I just wanted to maybe briefly  
9 talk about the process here. And everybody had an  
10 opportunity to do their presentation. As we go through  
11 these presentations, in a speaking order we will go  
12 through it.

13                   And in this case the North Slave Metis  
14 made a presentation. And based on your presentation,  
15 the speaking order have an opportunity to question you.  
16 So we'll -- I'll continue on with the format, so I'm  
17 going to go back to the North Slave -- sorry, Fortune  
18 Minerals, I'm sorry.

19

20                   (BRIEF PAUSE)

21

22                   DR. RICK SCHRYER:     It's Rick Schryer,  
23 Fortune Minerals. In relation to Bill's question  
24 concerning natural wetlands, we actually have a photo  
25 of a natural wetland we took at Nico yesterday.



1                   So if we could put it up on the screen I  
2 think we could show people what a natural wetland looks  
3 like if they're curious.

4                   THE CHAIRPERSON:       Absolutely.

5

6                                       (BRIEF PAUSE)

7

8                   DR. MONIQUE HAAKENSEN:   Monique  
9 Haakensen, Contango Strategies. So this is a picture  
10 that I took yesterday, actually on site at the Nico  
11 site and this one (1) was taken from a helicopter, so  
12 it's an aerial view, so the grid ponds.

13                   So the mine itself would be up around  
14 here. And currently, this is naturally just water  
15 flowing through and the water flows through here with  
16 arsenic concentrations of about 250 micrograms per  
17 litre.

18                   As the water passes through these  
19 natural systems, the plants are in the water and the  
20 soil together are creating the environment that allows  
21 the arsenic to be removed from the water in a natural  
22 system.

23                   This is a natural system that happens in  
24 all parts of the world through wetlands. As the -- the  
25 water passes through here, it gets cleaned more and

1 more. And by the time it gets to the Nico Lake, it's -  
2 - over half the arsenic has been removed.

3 Now, to show you what these plants look  
4 like close up, I have one (1) more picture that we took  
5 on site. We landed the helicopter and took some  
6 samples, as well as some pictured. And this is an  
7 example of the type of plants that you see in these  
8 wetlands. I'm not sure if you can zoom in there at  
9 all, Lasha. Right here in the middle, those are  
10 cattails.

11 The scientific name is Tifa (phonetic)  
12 but cattails and they grow in every place in the world  
13 and we have used these for a number of our wetlands in  
14 other countries and other locations. And these  
15 cattails can be used to create the environment that we  
16 need to remove those different contaminants from the  
17 water and put them into the soil. So this is just one  
18 (1) example of a wetland right on site.

19 As we were flying from Yellowknife to  
20 the site of the mine, we passed thousands of wetlands.  
21 So there are many, many examples of these in the  
22 Northwest Territories and in this area.

23 And in fact in Canada actually has  
24 ongoing research programs going on in -- in the  
25 Northwest Territories to learn about these ecosystems

1 and wetlands also. Thank you.

2

3 (BRIEF PAUSE)

4

5 THE CHAIRPERSON: Thank you for that.

6 Is there any further questions from Fortune Minerals to

7 -- regarding the North Slave Metis presentation?

8 DR. RICK SCHRYER: No further

9 questions, Mr. Chairman. Thank you.

10 THE CHAIRPERSON: Thank you. I'm going

11 to go to the Tlicho government. Is there any questions

12 for the North Slave Metis on their presentation?

13 DR. GINGER GIBSON: Tlicho government,

14 no questions.

15 THE CHAIRPERSON: Okay. Thank you.

16 There's -- I don't think there's anybody here from

17 Yellowknives Dene First Nation.

18 Akaitcho IMA Office...? Nobody here.

19 I want to go to Fisheries and Oceans

20 Canada, questions for the North Slave Metis on their

21 presentation?

22 MS. SARAH OLIVIER: Fisheries and

23 Oceans, no questions.

24 THE CHAIRPERSON: Okay. Thank you.

25 I'm going to go to the Government of Northwest

1 Territories.

2 MS. AILEEN STEVENS: Aileen Stevens,  
3 ENR. No questions. Thank you.

4 THE CHAIRPERSON: Thank you. I'm  
5 going to go to Aboriginal Affairs and Northern  
6 Development of Canada, AANDC.

7 MR. NATHAN RICHEA: Thank you, Mr.  
8 Chair. It's Nathan Richea with the Water Resources  
9 Division Aboriginal Affairs. We have no questions.

10 THE CHAIRPERSON: Thank you. I'm  
11 going to go to Transport Canada. Any questions for the  
12 North Slave Metis on their presentation?

13 MR. DALE KIRKLAND: Dale Kirkland,  
14 Transport Canada, no questions, Mr. Chair.

15 THE CHAIRPERSON: Thank you. Natural  
16 Resources Canada, any questions for the North Slave  
17 Metis on their presentation?

18 MR. JOHN KING: John King, Natural  
19 Resources Canada. No questions. Masi.

20 THE CHAIRPERSON: Okay. Thank you.  
21 I'm going to go to the Review Board staff. Any  
22 questions for the North Slave Metis on their  
23 presentation?

24 DR. KATHY RACHER: Kathy Racher for the  
25 Board staff. No questions.

1 THE CHAIRPERSON: Okay. Thank you.

2 I'm going to go to my left, Review Board members, Mr.

3 Percy Hardisty.

4 MR. PERCY HARDISTY: No questions, Mr.

5 Chair.

6 THE CHAIRPERSON: Thank you. Rachel

7 Crapeau...?

8 MS. RACHEL CRAPEAU: Thank you for the

9 presentation. I have no questions at the moment.

10 Thank you.

11 THE CHAIRPERSON: Thank you. Mr.

12 Danny Bayha...?

13 MR. DANNY BAYHA: Thank you, Mr. Chair.

14 I have no questions. Thank you.

15 THE CHAIRPERSON: Mr. Richard

16 Mercredi...?

17 MR. RICHARD MERCREDI: Thank you, Mr.

18 Chair, no questions at this time.

19 THE CHAIRPERSON: Thank you. Mr.

20 James Wah-shee...?

21 MR. JAMES WAH-SHEE: Thank you, Mr.

22 Chair. Thank you for the presentation. No questions.

23 THE CHAIRPERSON: Thank you. Mr. John

24 Curran...?

25 MR. JOHN CURRAN: Thank you, Mr.

1 Chairman. Just one (1) quick question. We've seen a  
2 number of narrative statements that were put up earlier  
3 on related to water quality.

4                   You've had a chance to see those during  
5 the other presentations. Do they seem acceptable to  
6 you if they were included as a result of this process?

7                   THE CHAIRPERSON: Thank you. I'm  
8 going to go to North Slave Metis, Bill Enge...?

9                   MR. BILL ENGE: Thank you. Bill Enge,  
10 North Slave Metis Alliance. Thank you for the  
11 question. The questions and concerns that I have in  
12 regard to the water is -- has to do with the  
13 proponent's theory about how the water can be cleansed  
14 from contaminants.

15                   And as far as the presentations by the  
16 Tlicho, I have no issues with their presentation,  
17 because I believe that they have the same concerns  
18 about the contaminants that are going to be released  
19 into the water that the North Slave Metis Alliance  
20 does.

21                   So, when it comes to dividing between  
22 who's speaking and what presentations are doing --  
23 who's making the presentation, my concerns are with the  
24 proponent and -- and I do have some concerns with the  
25 Crown's position as well, because they appear to -- not

1 to be as concerned about the potential damage that  
2 could be done to the environment as the Tlicho are  
3 concerned. Thank you.

4 THE CHAIRPERSON: Thank you. Mr. John  
5 Curran, any further questions?

6 MR. JOHN CURRAN: No, I think that is  
7 it, Mr. Chairman. Thanks.

8 THE CHAIRPERSON: Okay. All right.  
9 Thank you. I want to thank the North Slave Metis  
10 Alliance for your presentation. Masi.

11 Next on the agenda here is -- is the air  
12 quality presentation, Fortune Minerals. And I've been  
13 told that they're five (5) minutes long, so we'll go  
14 through that.

15  
16 AIR QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
17 FORTUNE MINERALS

18 DR. RICK SCHRYER: Thank you, Mr.  
19 Chairman. Rick Schryer, Fortune Minerals. I just want  
20 to point out that our air quality expert wasn't able to  
21 make it to these hearings. He was on standby with --  
22 by the phone, but he's -- I think he's gone to bed. So  
23 if there's any questions that I can't answer, we'd be  
24 glad to answer them in writing as quickly as we can.

25 This is a presentation on our ambient

1 air quality assessment for the Nico project. We  
2 completed a thorough ambient air quality modelling  
3 assessment. The ambient air quality was measured over  
4 a number of months and was added to the modelling  
5 values to predict future air quality conditions using a  
6 CALPUFF 3D model.

7                   The conclusions were that all predicted  
8 concentrations are at or below the applicable ambient  
9 air quality standards, federal and territorial, except  
10 predicted particular concentrations including TSP,  
11 which is Total Suspended Particulate and PM2.5, which  
12 are particles that are 2.5 microns in diameter and  
13 smaller. And we -- and these were predicted to exceed  
14 air quality standards near the site.

15                   However, if I can read my notes here,  
16 though these -- the exceedances of these criteria are  
17 predicted for particulate matter, we do not actually  
18 expect them to occur. This is based on professional  
19 judgment with other northern projects. In the event  
20 that it -- in the unlikely event that they would occur,  
21 the effects are expected to be of short-term,  
22 reversible, and localized.

23                   As stated in a number of documents,  
24 including our IR responses TG-31, YKDFN 3.1, and EC-7,  
25 Fortune Minerals will be developing a comprehensive air



1 quality monitoring plan and an incineration management  
2 plan.

3                   The incineration management plan will be  
4 developed to demonstrate that the dioxins and furan  
5 emissions are compliant with the natural -- the  
6 National Emissions Standards under natural -- or normal  
7 operating conditions.

8                   The comprehensive air quality monitoring  
9 plan will be developed to demonstrate compliance with  
10 the standards for TSP, PM2.5, NO2, and SO2.

11 Environment Canada has indicated that they would like  
12 to see Fortune Minerals use the model developed for the  
13 Snap Lake diamond mine for its air quality and  
14 emissions monitoring and management plan.

15                   And it -- and we would use this as a  
16 template to develop our plan as we move forward. The  
17 air quality monitoring plan will be developed  
18 cooperatively with the governments of the Northwest  
19 Territories, Environment Canada, and with involvement  
20 from the Tlicho Government as requested.

21                   The same goes for the incineration  
22 management plan. It would be developed and it would be  
23 consistent with the Environment Canada technical  
24 guidance document on batch incineration.

25                   In conclusion, we'd simply like to say

1 that Fortune Minerals is confident that source control  
2 will address concerns about air quality in the  
3 incinerator management plan. Thank you.

4 THE CHAIRPERSON: Thank you for your  
5 presentation, Fortune Minerals. Hopefully this will go  
6 quick here.

7 Again, questions -- question from the  
8 Tlicho government on regards to the air quality Fortune  
9 Minerals' presentation?

10

11 QUESTION PERIOD:

12 DR. GINGER GIBSON: Masi for your --  
13 Mr. Chair, Ginger Gibson, Tlicho Government. The  
14 predictions there -- I guess when -- when it comes to  
15 the release of the traditional knowledge, traditional  
16 use study, we'll be illustrating the use of traditional  
17 medicines in the region. In Lou Lake area, in  
18 particular, but right in the -- the area of the mine  
19 site. Elder Louie Zoe spoke of that this morning.

20 I'm wonder if -- if -- I -- I see the  
21 mitigation of inclusion of the Tlicho government in the  
22 -- the plans, but I'm wondering if -- if you have some  
23 -- if you can expand on what you -- your thoughts are  
24 with respect to protections, whether the protections  
25 are adequate for encouraging and -- and maintaining

1 traditional use of -- of medicines and of, for example,  
2 berry picking. Masi.

3 THE CHAIRPERSON: Thank you. Fortune  
4 Minerals...?

5

6 (BRIEF PAUSE)

7

8 MS. THERESA REPASO-SUBANG: Theresa  
9 Repaso-Subang with Golder Associates. Our assessments  
10 included evaluation of traditional -- consumption of  
11 traditional plants.

12 With the mitigation measures that have  
13 been described by Fortune, predictions of -- of dust --  
14 sorry, emissions of dust closer to the project  
15 footprint should be mitigated. So the -- based on our  
16 assessment the use of the resources as -- would  
17 continue in the future as -- as it was in the past.

18 DR. GINGER GIBSON: One (1) follow-up  
19 question, Mr. Chair.

20 Can you talk about whether there would  
21 be visual, just, you know, how far could we expect the  
22 visual kind of dusting to -- to -- in terms of the  
23 local project area, how far do you think that would be  
24 something was visually evident, or would it be at all?  
25 Masi.

1 THE CHAIRPERSON: Thank you. Fortune  
2 Minerals...?

3 DR. RICK SCHRYER: Rick Schryer,  
4 Fortune Minerals. The results of our modelling show  
5 that any dust cloud that you're talking about that  
6 would be visible would be limited to the direct mine  
7 site and not be visible beyond the boundaries of the  
8 property. Thank you.

9 THE CHAIRPERSON: Thank you. Any  
10 further questions from the Tlicho government? None?  
11 Thank you.

12 The next one I've got on the list, YKDFN  
13 is not here. Akaitcho IMA office is not here.

14 So I'm going to the North Slave Metis  
15 Alliance in regards to the presentation on air quality  
16 made by Fortune Minerals.

17 MR. BILL ENGE: Thank you, Mr.  
18 Chairman. What I've heard today in regard to Fortunes  
19 (sic) Minerals' preparation for this -- for their mine  
20 is to strike committees, a water monitoring committee,  
21 an air monitoring committee, a road committee. But  
22 none of these committees or -- or none of the -- these  
23 committees that Fortune wishes to put together to  
24 inform the aboriginal people that are going to be  
25 affected by this mine don't include the North Slave

1 Metis Alliance, or the North Slave Metis people.

2 And I guess my question is -- first of  
3 all, it's my first question is: Why hasn't Fortune  
4 Minerals come to the North Slave Metis and asked them  
5 to participate in this committee so they can become  
6 better informed about the effluent and em -- and  
7 emissions that their proposed mine is going to exact on  
8 the environment?

9 THE CHAIRPERSON: Thank you. Fortune  
10 Minerals...?

11 DR. RICK SCHRYER: Rick Schryer,  
12 Fortune Minerals. The committees that we're talking  
13 about are in their infancy and just getting off the  
14 ground. If the North Slave Metis are interested in  
15 participating in these working groups, we'd be glad to  
16 invite them to participate. Like I said, they're just  
17 getting -- we had a couple of initial meetings, that's  
18 it. But on terms of the -- really hitting the ground,  
19 then I'd be glad to invite your representatives to  
20 participate in the working group.

21 THE CHAIRPERSON: Thank you. North  
22 Slave Metis, you had another question?

23 MR. BILL ENGE: Thank you, Mr.  
24 Chairman. I guess I should, first of all, express my  
25 appreciation for Fortune Minerals saying publicly today

1 that they are interested in hearing from the North  
2 Slave Metis Alliance. One would think that they would  
3 know beforehand that we have an interest in what  
4 happens with their proposed mine.

5 Now, one of the things that this mine  
6 proposes to do is -- is use an incinerator to burn  
7 chemicals. And what I'm not hearing is that the  
8 chemicals' gas that's going to be released from that  
9 incinerator is going to have any serious impact on the  
10 -- the air and the -- and the water.

11 So I'd like to hear, just so I'm clear  
12 on this, what is the gaseous impact of that incinerator  
13 fumes going to be on the environment? And how -- just  
14 how far do you expect it to go? Thank you.

15 THE CHAIRPERSON: Thank you. I'm going  
16 to go to Fortune Minerals.

17

18 (BRIEF PAUSE)

19

20 MR. JOHN FAITHFUL: Mr. Chair, John  
21 Faithful, Golder Associates. Just a point of  
22 clarification with respect to the incinerator. The --  
23 it's a -- it -- it will be used to burn combustible mat  
24 -- combustible waste, and that will include kitchen  
25 waste and other non-recyclable, non-hazardous

1 combustible waste materials. Thank you.

2 THE CHAIRPERSON: Thank you. Any  
3 further questions of the North Slave Metis?

4 MR. BILL ENGE: Yes. Thank you, Mr.  
5 Chairman. Bill Enge here, North Slave Metis Alliance.

6 So, as I understand it, any of the  
7 dangerous chemicals that the mine uses to run -- to run  
8 the mine are not going to be incinerated and cause a  
9 negative impact on the environment, that this mine  
10 proposes to remove all of the noxious, toxic wastes out  
11 of the mine to somewhere else and I guess incinerate it  
12 somewhere other than at the mine site. Thank you.

13 THE CHAIRPERSON: Thank you. Fortune  
14 Minerals...?

15 DR. RICK SCHRYER: Rick Schryer,  
16 Fortune Minerals. Fortune Minerals has provided a  
17 detailed incinerator management plan in the DAR and  
18 subsequent envir -- Information Requests. The  
19 information is already on the public registry. But  
20 just to give Mr. Enge an example: Things like plastics  
21 won't be burned in the incinerator, that could  
22 potentially produce harmful chemicals. Those will  
23 either be recycled or taken away off the mine site.  
24 That's just an example.

25 There are other examples. We do have a

1 waste management plan as part of our submission. And  
2 the triage of wastes and what goods does and does not  
3 go into an incinerator is detailed in that plan.

4 THE CHAIRPERSON: Okay. Thank you.  
5 Any further questions for the North Slave Metis?

6 MR. BILL ENGE: Thank you, Mr.  
7 Chairman. I think I'll leave it there for now. I'll  
8 be pleased to ask more questions tomorrow. Thank you.

9 THE CHAIRPERSON: Thank you. I'm going  
10 to continue on to the Government of Northwest  
11 Territories. Any questions for Fortune Minerals on  
12 their presentation with air quality?

13 MS. AILEEN STEVENS: Aileen Stevens,  
14 ENR. I'll just carry on with my presentation at that  
15 time. I have no questions. Thank you.

16 THE CHAIRPERSON: Thank you.  
17 Aboriginal Affairs and Northern Development Canada,  
18 AANDC?

19 MR. NATHEN RICHA: Thank you, Mr.  
20 Chair. It's Nathen Richea, with the Water Resources  
21 Division, Aboriginal Affairs. We have no questions.

22 THE CHAIRPERSON: Thank you.  
23 Environment Canada, any questions for Fortune Minerals  
24 on their presentation?

25 MR. CAREY OGILVIE: Thank you. Thank



1 you, Mr. Chairman. Carey Ogilvie, Environment Canada.

2 No questions.

3 THE CHAIRPERSON: Thank you. Transport  
4 Canada...?

5 MR. DALE KIRKLAND: Dale Kirkland,  
6 Transport Canada. No questions, Mr. Chair.

7 THE CHAIRPERSON: Thank you. And  
8 Natural Resources Canada?

9 MR. JOHN KING: John King, Natural  
10 Resources Canada. No questions. Thank you.

11 THE CHAIRPERSON: Thank you. Review  
12 Board staff...?

13 DR. KATHY RACHER: Kathy Racher, for  
14 the Board staff. No questions.

15 THE CHAIRPERSON: Thank you. I'm going  
16 to go to my far left, Percy Hardisty, Board member.

17 MR. PERCY HARDISTY: Masi, Mr. Chair.  
18 No questions.

19 THE CHAIRPERSON: Thank you. Rachel  
20 Crapeau, Board member?

21 MS. RACHEL CRAPEAU: Masi cho, Mr.  
22 Chair. No questions at the moment.

23 THE CHAIRPERSON: Thank you. Board  
24 member Danny Bayha?

25 MR. DANNY BAYHA: Thank you, Mr. Chair.

1 Nothing. Thank you.

2 THE CHAIRPERSON: Thank you. Board  
3 member Richard Mercredi...?

4 MR. RICHARD MERCREDI: Thank you, Mr.  
5 Chair. No questions at this time.

6 THE CHAIRPERSON: Thank you. Board  
7 member James Wah-shee...?

8 MR. JAMES WAH-SHEE: Thank you, Mr.  
9 Chair. I have -- I have no questions. Thank you.

10 THE CHAIRPERSON: Thank you. Board  
11 member John Curran...?

12 MR. JOHN CURRAN: Thank you, Mr. Chair.  
13 I have no questions at this time.

14 THE CHAIRPERSON: Thank you. I want to  
15 say that you to Fortune Minerals for their  
16 presentation. I'm going to go to GNWT on their  
17 presentation on air quality.

18

19 (BRIEF PAUSE)

20

21 AIR QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
22 GNWT ON AIR QUALITY:

23 MS. AILEEN STEVENS: Good evening. My  
24 name is Aileen Stevens. I'm the air quality programs  
25 coordinator for the GNWT -- well, the Department of

1 Environment and Natural Resources.

2 ENR has been involved throughout the EA  
3 process, having reviewed the air quality component of  
4 the DAR, participated in the technical sessions and  
5 worked independently with the proponent's consultant to  
6 iron out any outstanding items. ENR acknowledges the  
7 air quality commitments made by the proponent to date,  
8 and would simply like to take this opportunity to  
9 reiterate them and confirm ENR's agreement with them.

10 This presentation will address three (3)  
11 topics, which are broken down as per the proponent's  
12 air quality related commitments in the July version of  
13 their commitments table. In addition to topics  
14 discussed at the February technical session, they  
15 include:

16 Practices to mitigate and reduce  
17 emissions;

18 A monitoring program and mitigation in  
19 adaptive strategies;

20 As well as incineration.

21 The presentation made by the developer  
22 today incorporates some of the content I will be  
23 addressing here, so that should make this go even more  
24 smoothly.

25 For topic number 1, Good Practices to

1 Mitigate or Reduce Emissions, the developer made  
2 commitments 10.1, 10.2, and 10.3. I'm not going to  
3 read them out in their entirety, but in general -- oh,  
4 I'll see if I can read it under the low light here --  
5 Fortune's committed to general management approaches  
6 for air emissions. They are going to work to minimize  
7 nitrogen oxide emissions, and they will be managing  
8 transportation related dust and particulate emissions.  
9 ENR accepts commitments 10.1, 10.2, and 10.3 with no  
10 comments.

11 The second topic is Air Quality  
12 Monitoring Program and Mitigation and Adaptive  
13 Strategies. The developer made Commitment 10.4,  
14 basically outlining the approach they take to develop  
15 monitoring programs. The proponent's presentation  
16 today also elaborated on the monitoring plan that was  
17 presented in the DAR. So, ultimately, we're all on the  
18 same page. Thank you for that.

19 Just, in general, the only change to  
20 make in the actual commitment table would be that the  
21 Air Quality Monitoring Program will be developed in  
22 consultation with ENR and EC, which you've already  
23 committed to today, so thank you.

24 The third topic is Incineration. The  
25 developer made the commitments at the technical session

1 on February 9th, indicating:

2 "An incinerator has been selected  
3 that will be designed to meet the  
4 CCME criteria for emissions on  
5 dioxins and furans. Further to that,  
6 an incineration management plan will  
7 be developed in consultation with EC  
8 and ENR, and an initial stack test  
9 would certainly be conducted post  
10 commissioning."

11 So the commitment was not specifically  
12 included in the updated commitments table, although  
13 aspects of it were mentioned today by the proponent in  
14 their presentation.

15 So ENR would just like to confirm that  
16 the Proponent is committing to developing an  
17 incineration management plan in consultation with EC  
18 and ENR, that you'll be selecting an incinerator that  
19 is designed to meet the Canada wide standards for  
20 dioxins and furans, and that you'll be conducting stack  
21 testing on the incinerator following commission --  
22 commissioning, pardon me.

23 And that's all I have to say for today.  
24 Thank you.

25

1 QUESTION PERIOD:

2 THE CHAIRPERSON: Okay. Thank you for  
3 your presentation. I'm going to go into questions. I  
4 always wanted to say this, does somebody else want to  
5 talk? Okay, I'm going to go to Natural Resources  
6 Canada, if they have any questions.

7 MR. ROB JOHNSTONE: Rob Johnstone, with  
8 Natural Resources Canada. We have no questions. Thank  
9 you.

10 THE CHAIRPERSON: Thank you. Transport  
11 Canada, any questions to -- to the GNWT on their  
12 presentation on air quality?

13 MR. DALE KIRKLAND: Dale Kirkland,  
14 Transport Canada. No questions, Mr. Chair.

15 THE CHAIRPERSON: Thank you, and we'll  
16 go to Environment Canada. Any questions?

17 MR. CAREY OGILVIE: Thank you, Mr.  
18 Chairman. It's Carey Ogilvie, Environment Canada. No  
19 questions.

20 THE CHAIRPERSON: Thank you.  
21 Aboriginal Affairs and Northern Development Canada?

22 MR. NATHEN RICHA: Thank you, Mr.  
23 Chair. It's Nathen Richa with the Water Resources  
24 Division, Aboriginal Affairs. We have no questions.

25 THE CHAIRPERSON: Thank you. I'm going

1 to go to the North Slave Metis Alliance. Any questions  
2 for the GNWT on their presentation on air quality?

3 MR. BILL ENGE: Thank you, Mr.  
4 Chairman. I just want to make sure I'm -- I'm clear on  
5 one (1) point that the presenter made, and that's in  
6 regard to the incineration issue. As I -- if I  
7 understand, what she said was that the emissions from  
8 the incinerator are going to be a work in progress, as  
9 opposed to knowing for certain exactly what the  
10 pollutants, the concentration of the pollutants are  
11 going to be before the mine goes into operation.

12 Do I understand that correctly? Thank  
13 you.

14 THE CHAIRPERSON: Thank you. I'm going  
15 to go to GNWT.

16 MS. AILEEN STEVENS: Aileen Stevens,  
17 ENR. The Canada-wide standards for dioxins and furans  
18 are the limits that are acceptable to be released from  
19 the stack during incineration. So the objective is to  
20 make sure that the appropriate incinerator is  
21 purchased, that's designed to combust the types and  
22 amounts of waste that there will be generated on site.

23 The Incineration Management Plan is  
24 designed to ensure that it's operated and maintained,  
25 so that it performs as per the manufacturer's design.

1 And then conducting the stack test upon commissioning  
2 will ensure that it does, in fact, meet the standards  
3 it's designed to.

4 THE CHAIRPERSON: Thank you. Any  
5 further questions from the North Slave Metis Alliance?

6 MR. BILL ENGE: Yes, thank you, Mr.  
7 Chairman. Bill Enge, North Slave Metis Alliance.

8 So, once again, I -- the roads lead back  
9 to this one (1) question. Is ENR committing to monitor  
10 the emissions from the incinerator during the life of  
11 the mine to ensure that the emissions meet the Canadian  
12 standards that they are expecting the incinerator to  
13 adhere to? Or, once again, is it necessary for us to  
14 have an independent monitoring agency to ensure those  
15 emissions stay within acceptable guidelines? Thank  
16 you.

17 THE CHAIRPERSON: Thank you, over to  
18 GNWT.

19 MS. AILEEN STEVENS: Aileen Stevens,  
20 ENR. I can't comment on the requirement for an  
21 independent monitoring agency. However, I expect that  
22 an incineration management plan would be adopted in the  
23 water licence process. And part of the incineration  
24 management plan would be stack testing periodically, as  
25 per the Snap Lake Air Quality Management Plan, which



1 the proponent did mention as their model.

2 And it would be up to the proponent to  
3 conduct the stack testing. And then, as part of  
4 whatever annual reviews which would be established as  
5 per the water licence, just like existing water  
6 licences, it would be reviewed and managed at that  
7 point.

8 THE CHAIRPERSON: Thank you. Any  
9 further questions by North Slave Metis Alliance?

10 MR. BILL ENGE: Thank you. Bill Enge  
11 here, of the North Slave Metis Alliance. That means  
12 then that ENR will not be monitoring the efficiency and  
13 -- of the emissions from the incinerator, but rather  
14 the proponent would be doing their own testing, as I  
15 understand it.

16 So, again, I -- I wish to put on the  
17 record that this is another case where it's clear to me  
18 that an independent monitoring agency is required to  
19 ensure that the emissions from -- the gaseous emissions  
20 from this mine would be properly monitored. Thank you.

21 THE CHAIRPERSON: Thank you. I'm going  
22 to got to the GNWT.

23 MS. AILEEN STEVENS: Aileen Stevens,  
24 ENR. Just to clarify, the proponent would be  
25 responsible for conducting the stack emission testing,

1 similar to how the Proponent would conduct their own  
2 water monitoring on-site, similar to how they would be  
3 managing their own waste on site. But they would be  
4 reporting on the results, and those results would be  
5 reviewed by the responsible agencies. And ENR would be  
6 one (1) of the agencies reviewing their annual reports.

7 THE CHAIRPERSON: Thank you. Is there  
8 any further questions for the North Slave Metis?

9 MR. BILL ENGE: Thank you, Mr.  
10 Chairman. No, that was all the questions I have for  
11 now. I'd -- I'll be glad to make -- have some more  
12 tomorrow. Thank you.

13 THE CHAIRPERSON: Thank you. I'm  
14 going to go to the Tlicho Government.

15 DR. GINGER GIBSON: Masi, Mr. Chair.  
16 Thank you very much for your -- your clear presentation  
17 and -- and your good work on this.

18 Can I ask you: Do you feel the  
19 mitigations that are set out in your presentation and  
20 then, we expect, agreed to by the Developer, do you  
21 feel that they're sufficiently protective of the  
22 traditional uses that we have identified through the  
23 course of the day? Masi.

24 THE CHAIRPERSON: Thank you. GNWT...?

25 MS. AILEEN STEVENS: Aileen Stevens,

1 ENR. I can comment that the model results for ambient  
2 air quality and dust deposition are expected to be with  
3 the within the GNWT guidelines for ambient air quality,  
4 and those guidelines are developed to be protective of  
5 human health and the environment.

6 But to ensure that the model's  
7 predictions are accurate, we expect to work with the  
8 proponent to develop an air quality monitoring plan so  
9 that we can monitor the air quality and verify that it  
10 does meet the predictions in the model so that we can  
11 compare it to the ambient guidelines.

12 I can't reference the traditional use  
13 specifically, but I can say the guidelines were  
14 developed to protect the human health -- human health  
15 and the environment, pardon me.

16 THE CHAIRPERSON: Thank you. Tlicho  
17 Government...?

18 DR. GINGER GIBSON: Thank you. We have  
19 no further questions.

20 THE CHAIRPERSON: Thank you. I'll  
21 move to Fortune Minerals.

22 DR. RICK SCHRYER: Rick Schryer,  
23 Fortune Minerals. I'd just like to make a -- just to  
24 clarify a few things concerning the presentation.  
25 Fortune Minerals did commit to post-commissioning stack

1 testing in IR response EC-11(3), commitment number 3,  
2 so we did commit to stack testing there.

3 And second, the specifications for our  
4 incinerator have been provided in the DAR. The  
5 specifications and its performance levels are all -- is  
6 all information that's available in the DAR and  
7 subsequent submissions, in IR responses. So if anybody  
8 wants to look at what kind of incinerator we're going  
9 to use and what we can expect from it, that information  
10 is available. Thank you.

11 THE CHAIRPERSON: Thank you. Is there  
12 any further questions from Fortune Minerals?

13 DR. RICK SCHRYER: Rick Schryer,  
14 Fortune Minerals. No further questions. Thank you.

15 THE CHAIRPERSON: Okay. Thank you.  
16 I'm going to go to Review Board staff.

17

18 (BRIEF PAUSE)

19

20 THE CHAIRPERSON: No further  
21 questions. Okay. I'm going to go to my right, Mr.  
22 John Curran.

23 MR. JOHN CURRAN: Thank you. No  
24 further questions at this time, Mr. Chair.

25 THE CHAIRPERSON: Thank you. Mr.

1 James Wah-shee...?

2 MR. JAMES WAH-SHEE: Thank you, Mr.

3 Chair. I just want to thank you for the presentation.

4 No questions. Thank you.

5 THE CHAIRPERSON: Thank you. Mr.

6 Richard Mercredi...?

7 MR. RICHARD MERCREDI: Thank you, Mr.

8 Chairman. No questions at this time.

9 THE CHAIRPERSON: Mr. Danny Bayha...?

10 MR. DANNY BAYHA: No questions. Thank  
11 you.

12 THE CHAIRPERSON: Ms. Rachel  
13 Crapeau...?

14 MS. RACHEL CRAPEAU: I heard testing  
15 and checking to see about ambient air quality and I was  
16 just kind of curious all of a sudden; diameter, like  
17 area, how -- how big is the area that you tested, like  
18 from -- like 20-mile radius or 30-mile radius for the  
19 air quality?

20 How -- how do you see that the testing  
21 to be done, because I kind of recall that some years  
22 ago when my father went up hunting on the winter road  
23 with my nephew, he said that there was too much bad air  
24 quality for the caribou. And he said that he was not  
25 happy with the trip, and he threw his hunting bag on

1 the floor and said, I guess I'm not going to be eating  
2 caribou tonight, because we didn't see any.

3 And I was kind of curious, like how far  
4 do -- is the mine going to be test -- do -- do -- are  
5 you suggesting the mine to -- to test the quality of  
6 the air and around just the mine site itself? And --  
7 and how far?

8 THE CHAIRPERSON: Thank you. GNWT...?

9 MS. AILEEN STEVENS: Aileen Stevens,  
10 ENR. We have yet to develop specifically where we'll  
11 place the monitors. That's something that will be  
12 developed further on. But we'll use the -- the model  
13 as an indicator of where to start in the near field and  
14 then expand to the far field.

15 But the majority of the air quality  
16 results indicated that detectable concentrations would  
17 be in the near field to the mine site, so that's likely  
18 where we would start. But we will develop that later  
19 on; or, I should say, the Proponent will develop that  
20 later on in consultation with ENR and EC.

21 THE CHAIRPERSON: Okay, thank you. Any  
22 further questions from Ms. Rachel Crapeau?

23 MS. RACHEL CRAPEAU: No further  
24 questions, Mr. Chair. But I'd like to think on this  
25 further and maybe I'll talk to you shortly or tomorrow,

1 or if you're going to be in Behchoko. Thank you.

2 THE CHAIRPERSON: Okay, thank you. Mr.  
3 Percy Hardisty, questions?

4 MR. PERCY HARDISTY: No questions, Mr.  
5 Chair.

6 THE CHAIRPERSON: Thank you. I want to  
7 thank the GNWT for your presentation, ENR. Masi. And  
8 the final presentation tonight, it will be the -- on  
9 the air quality. It'll be the North Slave Metis.

10

11 AIR QUALITY, OPERATIONS and CLOSURE PRESENTATION BY  
12 NORTH SLAVE METIS ALLIANCE:

13 MR. BILL ENGE: Yes, thank you, Mr.  
14 Chairman. Bill Enge here with the North Slave Metis  
15 Alliance. Again, I wish to thank the Board for the  
16 opportunity to voice the North Slave Metis Alliance's  
17 remarks on this issue. Frankly, the North Slave Metis  
18 Alliance is concerned that Fortune is providing  
19 inadequate predictions, monitoring standards, and  
20 enforcement for air quality.

21 The Nico Project talks about applicable  
22 standards which it expects to exceed in at least two  
23 (2) ways: nitrogen dioxide that will exceed applicable  
24 standards, 250 mls inside the project least boundary;  
25 and particulate concentrations will exceed applicable

1 standards outside the least boundary up to thirty-nine  
2 (39) days of the year. However, the applicable  
3 standards and identification of monitoring requirements  
4 are not developed. They are being left until the  
5 permitting process.

6 Furthermore, human, caribou, and fish  
7 health are expected to be affected by air quality  
8 changes, but there is no discussion of dioxin or furan  
9 emissions related to incarcerating (sic) garbage.

10 MS. SUSAN ENGE: Incinerating garbage.

11 MR. BILL ENGE: But I did hear  
12 something to the effect that none of these very  
13 dangerous, gaseous emissions are supposed to occur with  
14 the incinerator that they have on plan to put into  
15 effect; Freon emissions related to air condition; or  
16 any emissions related to processing chemicals, milling,  
17 cleaning products, paint, et cetera.

18 There is no incinerator management plan  
19 that we know of, because we didn't participate in any  
20 of the committee meetings that were kind of struck with  
21 -- by the Proponent, and we note that incineration can  
22 release dioxins and furans into the air.

23 We are also concerned that we find  
24 almost no discussion on -- of behavioural or aesthetic  
25 impacts on people, fish, wildlife, or birds from dust,



1 visibility, vibrations, or odours. In fact, it is not  
2 clear to us who is really responsible for monitoring  
3 and enforcing the air quality.

4 The NSMA, therefore, recommends that  
5 Fortune should be required to generate predictions for  
6 dioxins, furans, odours, and visibility, and provide  
7 clear certainty regarding who will regulate and enforce  
8 air quality standards.

9 And once again, I suggest the best way  
10 to monitor air standards, water, the environment was an  
11 independent monitoring agency that can ensure that  
12 Fortune Minerals lives up to the standards that they  
13 say they will respect. Thank you.

14 THE CHAIRPERSON: Thank you, Bill Enge,  
15 in your presentation. I just wanted to ask you a  
16 question, Bill. Is that presentation in our binders?  
17 If not, can we get a copy of your presentation, oh, for  
18 the Board and also for evidence?

19 MR. BILL ENGE: Excuse me, Mr.  
20 Chairman. Bill Enge here with North Slave Metis  
21 Alliance. I just wanted you to restate what it is that  
22 you would like me to provide you with. Thank you.

23 THE CHAIRPERSON: Well, we were giving  
24 everybody an opportunity to comment on air quality.  
25 And, as previously, the presenters made theirs through

1 a PowerPoint presentation. And basically what you did  
2 was you read out your presentation. So our binders  
3 don't have that, and we need that for evidence.

4 So you read it out, but I wouldn't mind  
5 having a copy of it, if you can make it available.

6 MR. BILL ENGE: Thank you, Mr.  
7 Chairman. I will be glad to provide you with a copy of  
8 my written presentation.

9  
10 QUESTION PERIOD:

11 THE CHAIRPERSON: Okay. Thank you.  
12 I'm going to continue on. Questions from Fortune  
13 Minerals on North Slave Metis presentation on air  
14 quality.

15 DR. RICK SCHRYER: Rick Schryer,  
16 Fortune Minerals. No questions. Thank you.

17 THE CHAIRPERSON: Thank you. Tlicho  
18 Government...?

19

20 (BRIEF PAUSE)

21

22 DR. GINGER GIBSON: Masi. We have no  
23 questions at this time.

24 THE CHAIRPERSON: Okay. Thank you.  
25 I'm going to go to the Government of Northwest

1 Territories.

2 Any question for the North Slave Metis  
3 on their presentation?

4 MS. AILEEN STEVENS: Aileen Stevens,  
5 ENR. No questions. Thank you.

6 THE CHAIRPERSON: Thank you.  
7 Aboriginal Affairs and Northern Development Canada,  
8 AANDC?

9 MR. NATHEN RICHEA: Thank you, Mr.  
10 Chair. It's Nathen Richea, with Aboriginal Affairs.  
11 We have no questions.

12 THE CHAIRPERSON: Okay. Thank you.  
13 Environment Canada...? Thank you.

14 I'm going to go to Transport Canada.

15 MR. DALE KIRKLAND: Dale Kirkland,  
16 Transport Canada. No questions, Mr. Chair.

17 THE CHAIRPERSON: Thank you. Natural  
18 Resources Canada...? Okay. Thank you.

19 I'm going to go to the Review Board  
20 staff.

21 DR. KATHY RACHER: Kathy Racher for the  
22 Board staff. We have no questions.

23 THE CHAIRPERSON: Thank you. I'm going  
24 to go to the Board members to my right, Mr. John  
25 Curran.

1 MR. JOHN CURRAN: No questions at this  
2 time, Mr. Chairman.

3 THE CHAIRPERSON: Thank you. Mr. James  
4 Wah-shee...?

5 MR. JAMES WAH-SHEE: Thank you, Mr.  
6 Chair. No questions. Thank you.

7 THE CHAIRPERSON: Thank you. Mr.  
8 Richard Mercredi...?

9 MR. RICHARD MERCREDI: Thank you, Mr.  
10 Chair. No questions.

11 THE CHAIRPERSON: Mr. Danny Bayha...?

12 MR. DANNY BAYHA: Thank you. No, I  
13 have no questions.

14 THE CHAIRPERSON: Thank you. Ms.  
15 Rachel Crapeau...?

16 MS. RACHEL CRAPEAU: No questions, Mr.  
17 Chair.

18 THE CHAIRPERSON: Thank you. Percy  
19 Hardisty...? Mr. Percy Hardisty...?

20 MR. PERCY HARDISTY: Masi, Mr. Chair.  
21 No question.

22 THE CHAIRPERSON: Thank you. I'd like  
23 to thank the North Slave Metis for presenting on air  
24 quality. Masi.

25

1 (BRIEF PAUSE)

2

3 THE CHAIRPERSON: Okay, thank you. I  
4 believe we have just one (1) quick question before I do  
5 my closing comments, from the Tlicho Government.

6 DR. GINGER GIBSON: Masi, Mr. Chair.  
7 We've raised the possibility with the Review Board and  
8 with the Developer of having the public be able to get  
9 to the microphones earlier in the process in Behchoko  
10 than Friday at 3:30 p.m., as it is currently indicated  
11 on the agenda, for a variety of reasons.

12 We are very concerned about people being  
13 able to get to the microphones earlier, some of which  
14 relate to this being -- one (1) of which is that this  
15 is the last weekend before people are at school. So we  
16 know that many families are going to be travelling this  
17 weekend and leaving early on Friday.

18 It's a long weekend, in addition. And  
19 so that means many families will be heading to Grande  
20 Prairie and Edmonton to stock up on school supplies.  
21 We know that this is the largest community in the  
22 Tlicho region. And we know that in Whati we heard from  
23 thirty-three (33) people in the short period of time  
24 when the microphone was open.

25 And we also know that if people in

1 Behchoko are asked to sit for a day and a half before  
2 they're able to make public comment, that there will be  
3 public concern about that question itself. And so  
4 we're concerned about this. And we have asked --  
5 respectfully asked the Developer to support that  
6 question of having the microphones be open tomorrow  
7 after -- or, tomorrow evening at Elizabeth Mackenzie  
8 School (phonetic), and we've raised it with the Review  
9 Board and we'd -- we'd like to see if there's -- if  
10 there is a response on this question.

11 We do recognize that we're here late  
12 tonight and we do recognize we were together late on  
13 Monday night, and so we think that we're asking a lot  
14 of Review Board staff and Review -- Review Board  
15 members and -- and we have been very grateful for your  
16 long hours and attention on this file, as it has been  
17 hard work. So we -- we look to you for your -- your  
18 rule on this -- your ruling on this, or your -- your  
19 decision on this, and your direction on the proceeding.  
20 Masi cho.

21 THE CHAIRPERSON: Thank you, Ginger  
22 Gibson, for your question. I think it's been a long  
23 day already, so maybe I can sleep on it and I'll give  
24 you my response tomorrow morning in Behchoko at nine  
25 o'clock, first thing. And what I'll do is, I think

1 we're pretty flexible, but I'll -- I'll get back to you  
2 on that.

3 DR. GINGER GIBSON: Mr. Chair, may I --  
4 may I just raise one (1) issue. I'm concerned that if  
5 we wait on this decision there's two (2) logistical  
6 problems. The first is feeding people in Behchoko is  
7 not a possibility without advanced planning.

8 And secondly, I -- we would need to let  
9 the public know about the change through a variety of  
10 channels, including Facebook and word of mouth, and --  
11 and radio. And so we're asking that -- I -- I guess  
12 we're asking for a decision whether the -- yes, or no  
13 on this question earlier so that the planning for that  
14 eventuality can occur. Masi cho.

15 THE CHAIRPERSON: Okay. Well, give --  
16 well, give me -- I'll take a five (5) minute break.  
17 We'll have a huddle and I'll make a decision on your  
18 ruling. Okay, huddle.

19

20 --- Upon recessing at 9:04 p.m.

21 --- Upon resuming at 9:09 p.m.

22

23 THE CHAIRPERSON: Okay, if we could  
24 get back to the table we could start. Thank you. I'm  
25 going to respond back to the Tlicho government in

1 regards to your request for ruling.

2 In regards to staying in Behchoko and  
3 continuing on to tomorrow evening, just to let you know  
4 that what took place in Whati and the reason why we  
5 went late that evening is because we started late and  
6 we originally agreed to the agenda of seven (7) hours  
7 and, unfortunately, things didn't work out where  
8 equipment got in there and our proponent -- what you  
9 call the developer was late due to weather.

10 So, we lost probably in the morning a  
11 good hour and a half and we started at 11:30 and -- but  
12 we didn't stop, we went right through so of seven (7)  
13 hours we went and met for eight and a half (8 1/2)  
14 hours that day in Whati because of the time we lost in  
15 the morning and sometimes we have no control over that.

16 And again, here tonight, you know, we  
17 had some, again, technical, minor technical issues and  
18 we had power outages that we had no control over and,  
19 again, we wanted to finish the agenda for the session  
20 here in Yellowknife.

21 In regards to Behchoko for the next two  
22 (2) days, again, I think everybody's fully aware that  
23 we have a process in place, you know, we have technical  
24 meetings and so on and the Board has been on this file  
25 for some time and, again, you know, I know that in some



1 cases where presentation goes over and we try and be  
2 accommodating. But right now as it is the Review Board  
3 has been meeting and reviewing all documents and  
4 presentations for this public hearing.

5 So, the request from the Tlicho for us  
6 to stay tomorrow evening in Behchoko the Board at this  
7 time request that -- deny your request for that because  
8 we already agreed to this over a month ago and -- and  
9 we said that we were going to continue to stick to the  
10 agenda and that's what we're going to do.

11 So, that -- that will be my response to  
12 your question. Thank you.

13 MS. GINGER GIBSON: Ginger Gibson,  
14 Tlicho government. Thank you very much for considering  
15 our request.

16 THE CHAIRPERSON: Thank you very much.  
17 Okay, it's been a long day. I think everybody's been  
18 patient here tonight. It's actually pretty warm in  
19 here. I think everybody is also getting a little bit  
20 tired and I want to thank all the presenters that were  
21 here tonight and, again, you know, presentation -- you  
22 know, continues -- continues to inform the Board on  
23 exactly where you guys are coming from and -- and based  
24 on this information we'll continue to use this  
25 information during our deliberation to make a decision

1 and -- and once a decision is made then we'll make a  
2 recommendation to the Minister.

3                   So, this is Day 2 of 4 of the Nico  
4 public hearing on EA 0809-004. So in closing, I want  
5 to, again, thank all the Board members, Danny Bayha,  
6 Rachel Crapeau, James Wah-shee, Richard Mercredi, John  
7 Curran, Percy Hardisty. Also, I've got my staff here  
8 that are here in the back here. I have -- earlier  
9 today we had Vern Christensen our executive director.  
10 We have Chuck, who is also, Hubert, is also the person  
11 in charge of this file. We had Simon Toogood, Paul  
12 Mercredi, Stacey Menzies, Shannon Hayden and Cailin.

13                   We also have our legal counsel Mr. John  
14 Donihee, Cathy Racher and Brent Wheler. Thank you.  
15 For the catering we had here today that was providing  
16 tea, coffee, et cetera were provided Chef Pier  
17 (phonetic) and transcription again is done by Lorraine  
18 Douglas and the translators are Mary Rose Blackduck and  
19 Merna Martin (phonetic). I want to say thank you very  
20 much. And also Pido Production Pat Braiden, masi for  
21 your assistance here today.

22                   And again, to Fortune Minerals, the  
23 Tlicho government, North Slave Metis, all the  
24 presenters that were here today and the government  
25 departments, I want to thank you very much. Masi cho.

1                   Tomorrow morning we're going to continue  
2 in Behchoko for two (2) days starting 9:00 to 5:00.  
3 The agenda is in your package, it's there, and we're  
4 going to continue to try and maintain that agenda but,  
5 unfortunately, we have no control over what happens.  
6 So, I'm going to bring my generator tomorrow and we're  
7 hoping we have no problems.

8                   So, with that, I don't know -- I don't  
9 see any Elders in the crowd that -- that maybe could do  
10 a closing prayer, but, I'm going to ask Mr. James Wah-  
11 shee, our young elder, to do the closing prayer here  
12 tonight. Masi

13

14                   (CLOSING PRAYER)

15

16                   THE CHAIRPERSON: Thank you very much,  
17 Mr. Wah-shee. This concludes our meeting for today at  
18 9:15.

19

20 --- Upon adjourning at 9:15 p.m.

21

22 Certified Correct,

23

24 \_\_\_\_\_

25 Lorraine Douglas, Ms.

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