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2	MACKENZIE	VALLEY ENVIRONMENTAL	
3	IMPAC	CT AND REVIEW BOARD	
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5	TECHN	NICAL SESSION FOR	
6	PRA	AIRIE CREEK MINE	
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11	Mackenzie Valley Review E	Board Staff:	
12	Facilitato	or Chuck Hubert	
1 3	MVEIRB Sta	aff Nicole Spencer	
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1		LIST OF UNDERTAKINGS	
2	NO.	DESCRIPTION PAGE	NO.
3	2 5	For Canadian Zinc to provide a more	
4		complete description of the mixing	
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7		quality, the output only represented	
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1 0		areas of the highest expected	
1 1		concentrations, not just those where	
1 2		there will be exceedences to assist with	
1 3		establishing a monitoring plan.	113
1 4	2 7	Canadian Zinc commits to implement the	
1 5		air monitoring system as outlined in	
16		the report	115
1 7	2 8	For Canadian Zinc to draw up the terms	
18		of reference, incorporating some of those	
19		components, as well as suggest the	
2 0		parties to that committee and possible	
2 1		involvements, and send that out for	
2 2		review re formulation of a technical	
2 3		advisory committee	124
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1 --- Upon commencing
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- 3 THE FACILITATOR: Our agenda item today
- 4 are components of the mine itself, as well as -- in the
- 5 morning, and human environments in the afternoon.
- Just to note, people at my table here, I'm
- 7 -- my name being -- is Chuck Hubert with the Review
- 8 Board. On my left, Ramli Halim, our consultant from
- 9 Hatch Limited. And Nicole Spencer, a colleague, an
- 10 environmental assessment officer with the Review Board as
- 11 well.
- 12 With that, I'd like to begin with our
- 13 agenda item as is stated, and we'll start with -- just
- 14 one (1) logistical issue before I start. A shuttle will
- 15 be leaving the building at 12:00 p.m. and 3:30 p.m. I
- 16 understand some people may need to catch planes, so the
- 17 shuttle leaves here at 12:00 p.m. and 3:30. And I
- 18 understand Mr. Redvers would like a few opening comments.
- MR. PETER REDVERS: Thank you. Peter
- 20 Redvers, Naha Dehe Dene Band. Just a -- I guess a
- 21 procedural and timing question, and it's a -- a bit of a
- 22 follow-up from yesterday, and bearing in mind that there
- 23 was some new information posted to the Water
- 24 Environmental Impact Review Board site regarding the
- 25 outfall and the downstream mixing, et cetera.

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1 I'm just trying to get an understanding of
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- 2 sort of the timing or next steps in relation to
- 3 particularly the -- the water quality issue. We're still
- 4 -- this summary notes that there is to be further
- 5 documentation or a -- a more complete letter report has
- 6 been referred to. There's also been a number of
- 7 information -- we won't call them information requests
- 8 because that's -- refers to a different process, but
- 9 there have been a number of requests for information that
- 10 have come out of the discussions on the first and the
- 11 second day relating to some of the water issue and
- 12 chemical composition, et cetera.
- 13 Once that information gets -- is -- is on
- 14 the table for everybody to review, then there is, in
- 15 essence, a -- a complete description of the project. In
- 16 this -- that includes this documentation, and I'm not
- 17 sure whether it would be dealt with in the subsequent
- 18 letter report. There's still a need for a -- an
- 19 assessment of the -- the impacts. You know, what does
- 20 that mean in terms of the river and aquatic life and the
- 21 significance of those impacts. And then, as required,
- 22 any finalization of mitigation measures.
- 23 So I guess procedurally my concern is
- 24 where does the Naha Dene Band fit into this in the sense
- 25 of what's next. Where would be an opportunity, once this

- 1 information has been -- all been brought forward and
- 2 there's been an opportunity to review it, for the Naha
- 3 Dene Band to participate in some form of a discussion or
- 4 forum to -- with some of the regulators in Canadian Zinc
- 5 to get a better understanding of the -- the impacts from
- 6 particularly the sort of the discharge strategy I guess,
- 7 such that I can go back into the community and -- or the
- 8 community when it sits down at the community hearing
- 9 phase, or just before that, to -- can assess both the --
- 10 the impacts or the potential positive impacts of the
- 11 project, as been negotiated through the IBA (phonetic),
- 12 weighed against, you know, a fairly thorough
- 13 understanding of the potential impacts on -- on the water
- 14 system, and certainly have the opportunity to determine
- 15 themselves what the significance of those impacts would
- 16 be.
- So procedurally where are we in terms of
- 18 that being able to get to that point where we can have
- 19 that understanding?
- 20 THE FACILITATOR: Chuck Hubert, the
- 21 Review Board. Thanks for those comments.
- 22 After the techno session, I understand the
- 23 developer will need some time to process the information
- 24 that has occurred here, and they will respond to the
- 25 various information items and requests in due course.

- 1 That's their schedule.
- I would like to once again mention that
- 3 parties are encouraged to meet with the developer on --
- 4 on some of these issues, on the side. And if there are
- 5 items that need to be addressed, we call them sidebar
- 6 meetings; we have a template for them which is on our --
- 7 our website. The intent is to get these unresolved
- 8 issues dealt with in -- in a smaller format with a
- 9 smaller group of people, and to provide a record of those
- 10 discussions and have them on the website once they're
- 11 completed. So that's -- that's one (1) follow-up
- 12 mechanism for -- with that I'd like to proceed with the
- 13 agenda.
- 14 So the topic, water storage pond,
- 15 specifically, or the catchment pond. The teleconference
- 16 -- can people hear me on the teleconference?
- 17 UNIDENTIFIED SPEAKER: Yeah, I can hear
- 18 you.
- 19 THE FACILITATOR: Thank you.
- 20 MR. RAMLI HALIM: Hi, this Ramli Halim, a
- 21 Hatch consultant with the Review Board.
- The first one (1) is -- this is about
- 23 water storage pond. It's understood that the request for
- the rebuilt perimeter dyke will be much higher than water
- 25 levels anticipated for the -- maximum flow in the flood

- 1 events. However, this flood level in the quick will be
- 2 used to determine how high is the protective slope of the
- 3 dyke.
- And I -- in the Golder perimeter design
- 5 report, in Appendix 12 I believe of the DAR, uses the
- 6 elevation of eight hundred and seventy-five (875) for the
- 7 crest of the dyke, and I was wondering if you can
- 8 probably provide us information how that elevation eighty
- 9 (80) -- eight seventy-five (875) being derived for the --
- 10 for the -- for the design.
- 11 MR. DAVE HARPLEY: Our consultant will be
- 12 online in about ten (10) minutes. Can we revisit that
- 13 question?
- 14 MR. RAMLI HALIM: Okay. I guess probably
- 15 -- I guess probably I'm going to just -- I'm not quite
- 16 sure this next question that I have is related to the CDM
- 17 guideline. I was wondering if that's going to be the
- 18 same response, just going to wait for about ten (10)
- 19 minutes?
- MR. DAVE HARPLEY: Yes.
- 21 MR. RAMLI HALIM: Okay. I'll go to the
- 22 next one. Is perhaps -- this is probably a question that
- 23 probably Byard can answer is -- is about the water
- 24 balance diagram that you provided yesterday. I just kind
- 25 of curious to know is there a minimum residency time

1 required for the processed water going from Cell A, which

- 2 is coming from the -- from the plan, go to the Cell B
- 3 before it being recycled?
- 4 MR. BYARD MACLEAN: Could you repeat the
- 5 question? I --
- 6 MR. RAMLI HALIM: Basically, I just want
- 7 to find if there is a -- in the diagram yesterday for the
- 8 process, what is the minimum residency time required for
- 9 the process water that you dump in Cell A from the plan
- 10 before it's actually going back into the Cell B.
- 11 Basically, effectively, I just want to
- 12 know in terms of if this water has to go through the
- 13 series of baffles, and I just want to make sure that
- 14 actually is that things being accounted for that it going
- 15 to be redraw back and there's enough time for that water
- 16 before -- because there's going to be some of these
- 17 chemicals has to be going to the process or actually have
- 18 to go getting aeration before it can be recycled back.
- 19 I was tyring to figure out if there is a
- 20 bottleneck, for example, in terms of requirement of
- 21 water. You need more water because you cannot send that
- 22 one (1) back as quickly as possible.
- 23 MR. BYARD MACLEAN: Byard MacLean,
- 24 Canadian Zinc. The -- the actual aging time is difficult
- 25 to predict, but based -- based upon other operations that

- 1 are making lead-zinc concentrates, you need to have a
- 2 minimum of about two (2) weeks to be safe. And this plan
- 3 that we've put in place is -- the residence time is
- 4 measured in months, so I think from a process perspective
- 5 we've -- we've been extremely conservative.
- 6 MR. RAMLI HALIM: Okay. The next
- 7 question is related to the -- the north slope. There is
- 8 a historical instability of the old tailing ponds that
- 9 caused some concern, and further installation of the
- 10 slope indicators shows that there's still some movement
- 11 in the area.
- 12 What is -- the first question is what is
- 13 Canadian Zinc plan to the final design and construction
- 14 of the pond, in terms of additional investigation or
- 15 placement of additional instrumentation to make sure that
- 16 the plan that they have now is going to be working?
- MR. DAVE HARPLEY: Dave Harpley. Can we
- 18 skip these questions until we have our engineer online,
- 19 please?
- MR. RAMLI HALIM: Okay.
- 21 THE FACILITATOR: Thanks. Yeah, we can
- 22 skip those questions until you have your engineer online.
- 23 Chuck Hubert with the Review Board. Do we
- 24 have any questions from the floor that are related to the
- 25 topics under mine site components that would not require

- 1 an engineer to respond?
- 2 MR. JAMIE VANGULCK: Jamie VanGulck,
- 3 Parks Canada consultant.
- I was wondering if we'd be able to look at
- 5 Table 6.4 of the DAR on the -- the screen there. I've
- 6 got a couple of questions about the numbers and it'll
- 7 probably just be clarification questions at this point.
- MR. BYARD MACLEAN: What page is that on?
- 9 MR. JAMIE VANGULCK: It's page 199, Table
- 10 6.4. Thank you.
- 11 Some of the formatting in the left column
- 12 is missing at the bottom there, they've just been cut
- 13 off, and I think that's what's leading to my confusion
- 14 here. But the one (1) number that deals with backfill
- 15 not placed underground, it's about 308,000 cubic metres,
- 16 it's my understanding that the backfill component is both
- 17 the tailings and the DMS rock.
- 18 And if that's right, where does that
- 308,000 cubic metres go? Is that going to the waste rock
- 20 pile?
- 21 MR. ALAN TAYLOR: Is -- is Alan Taylor
- 22 here. You're correct, that goes -- reports to the waste
- 23 rock pile.
- 24 MR. JAMIE VANGULCK: Of the backfill
- 25 component then that is placed to the waste rock pile

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1 using 2.8:1 ratio of tails to dense media rock, that
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- 2 leaves about 120,000 cubic metres of tailings then going
- 3 to the waste rock pile at closure?
- 4 MR. DAVE HARPLEY: All the tailings go
- 5 underground. The three hundred and eight (308) is all
- 6 DMS rock that's going to the waste rock pile, not
- 7 tailings.
- 8 THE FACILITATOR: Thank you. Do you have
- 9 a follow-up question?
- 10 MR. JAMIE VANGULCK: Yeah, just a follow-
- 11 up. I guess the -- the terminology is what's throwing me
- 12 then. The numbers on the screen there show unplaced
- 13 backfill, which includes DMS and the flotation tailings
- of 3.7 million cubic tonnes. Or sorry, 3.7 million
- 15 tonnes. The placed backfill is 3.4 million tonnes. The
- 16 remainder is 308,000 tonnes, which is both tailings and -
- and backfill -- or sorry, tailings and DMS rock.
- 18 But now you're saying that that backfill
- 19 is only DMS?
- 20 MR. DAVE HARPLEY: That's correct. You
- 21 could read that "backfill not placed" as "backfill
- 22 components not placed." It's not a case where we have
- 23 backfill, that we're basically filling the mine until we
- 24 -- we have backfill mix leftover; that's not how it
- 25 works, you know. We will be placing all the tailings

- 1 underground as backfill.
- THE FACILITATOR: Does that answer your
- 3 question?
- 4 MR. JAMIE VANGULCK: Yes, thanks very
- 5 much. I have one (1) unrelated question. I guess I'd
- 6 just like to have confirmation that all tailings will be
- 7 placed underground. I did get a sense in the DAR that
- 8 there's some challenging endeavours that are related to
- 9 the dewatering of the tailings, and I know there's
- 10 challenging endeavours of actually running a placed
- 11 backfill plan.
- 12 In the event of either of those upsets,
- 13 will there for sure be confirmation that the tailings
- 14 will be placed underground? That might be related more
- 15 to the economics of the situation but in moving forward
- 16 that's -- that's a critical piece of information that's
- 17 needed to understand impacts. I don't know if there's
- 18 another plan for tailings management other than being
- 19 placed underground.
- 20 MR. BYARD MACLEAN: Byard MacLean,
- 21 Canadian Zinc. The design basis of the tailings
- 22 treatment system is to put 100 percent of the tailings
- 23 back underground. The Golder pace tech (phonetic) was
- 24 specifically engaged to deal with that specific issues
- 25 that -- about what combination of tailings, or tailings

- 1 plus reject, obtain that goal and fill as much of the --
- 2 of the -- the voids underground as practically possibly,
- 3 and 100 percent of the tailings.
- 4 MR. DAVE HARPLEY: Dave Harpley. Our
- 5 geotechnical engineer is on the phone right now. It's
- 6 David Caughill from Golder and Associates. So if you
- 7 want to go over those questions again.
- THE FACILITATOR: Thank you. Yes, we'll
- 9 proceed with those questions.
- MR. RAMLI HALIM: Hi, this is Ramli Halim
- 11 with Hatch, consultant to the Review Board. The fir --
- 12 the first question to Golder is about the waste and water
- 13 storage pond that I -- that facing the Prairie Creek.
- 14 The elevation of the riprap was designed for elevation
- 15 eight seventy five (875).
- 16 My question is -- the elevation eight
- 17 seventy-five (875) been chosen, what is that rela --
- 18 referenced to in terms of the flood of the Prairie Creek?
- 19 MR. DAVE HARPLEY: Okay. This is Dave
- 20 Harpley. I guess I misunderstood your question the first
- 21 time, but now I think I do understand what you're asking,
- 22 and I believe I can -- I can answer it.
- The eight-seven-five (8-7-5) elevation was
- 24 selected by Copristman and Kilborn (phonetic) during the
- 25 original construction of the dam and it's based on their

1 estimate of the maximum probable flood they estimated at

- 2 the time.
- 3 Since that time, we engaged a hydrologist
- 4 from Hay and Company to review that estimate and update
- 5 it based on more recent information, and they came back
- 6 with a series of stage measurements at different
- 7 locations along the dyke for comparison to the original
- 8 estimates. And in every case they've -- they came up
- 9 with estimates that were -- flood estimates that were
- 10 lower than the original numbers, giving us more
- 11 confidence that the original design is still conservative
- 12 for floods of high magnitude.
- 13 MR. RAMLI HALIM: Okay. I quess the
- 14 second question is actually related to the first one.
- 15 Basically, I'm try to make a reference to what kind of
- 16 flood event that's related to, because the second
- 17 question is related to the CDM guideline that Canadian
- 18 Zinc thinks that for the water storage portion it is
- 19 relevant that it can be considering using a CDM -- can be
- 20 designed using a CDM guideline because it -- and then
- 21 it's been categorized as a high to very high risk.
- 22 And, therefore, I just want to find out
- 23 that for that high to high risk in the reply provided by
- 24 Canadian Zinc in their responses, and have mentioned
- 25 about a flood of at least 1:1000 year flood for the water

- 1 storage pond. If you can confirm that.
- 2 MR. DAVE HARPLEY: Dave Harpley. I
- 3 believe you're referring to information that was in your
- 4 Information Request from the Review Board, number 3. So
- 5 we've given a reply there. I think it perhaps actually
- 6 behooves you to answer whether that reply you were given
- 7 is acceptable or whether you're questioning it. And if
- 8 you are, on what basis you are.
- 9 MR. RAMLI HALIM: Well, basically, we
- 10 just -- I just want to find out that you actually kind of
- 11 in the response to 3.2 question for Mackenzie Valley
- 12 Impact Review Board that you can agree for that
- 13 classification and use of CDM quideline.
- 14 And my question is basically: Are you
- designing that eight hundred and seventy-five (875)
- 16 elevation for the riprap is a -- as a level where the
- 17 flood is going to be for 1:1000 or even more? Because
- 18 that's what basically the CDM guideline requirement for
- 19 high to very high risk.
- 20 MR. DAVE HARPLEY: Dave Harpley. I'm not
- 21 sure it matters whether we agree or disagree if we're
- 22 following CDM guidelines or not simply because the design
- 23 flood used for the construction of the dyke is
- 24 considerably higher than those return period numbers
- 25 anyway. So I think it's just a moot point.

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1 MR. RAMLI HALIM: Yes, I quite agree that
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- 2 crest is -- I don't think there is any problems in terms
- 3 of the crest. I'm just asking for the top of riprap
- 4 because that's the one (1) that being protecting during
- 5 the maximum flood that going to happen during -- on the
- 6 Prairie Creek. That's the only question that come up
- 7 with elevation eight seventy-five (875).
- 8 MR. DAVE HARPLEY: Dave Harpley. I --
- 9 I'm not sure how to answer that. The eight seventy-five
- 10 (875) elevation, as I said, is based on the historical
- 11 estimate of maximum probable flood and the re -- the
- 12 reevaluation determined that that flood was at least, I
- 13 think it's a one (1) in -- was it ten thousand (10,000)
- 14 year return period? I believe it was as a comparable
- 15 estimate. So I'm not sure if that gives you your answer.
- 16 MR. RAMLI HALIM: Yes. I think that's
- 17 the kind of direction I have. Because when I go to the
- 18 Hay and Company records they mention about 1:10,000 years
- 19 flood, and then they provide the req -- what's the crest
- 20 of the dyke going to be, of course, and the number is
- 21 quite -- quite high. And I guess that's going to be less
- than eight hundred and seventy-five (875). And that's
- 23 probably the number I'm looking for basically.
- 24 So I guess probably I'm going to move on
- 25 to the next question, is about the north slope.

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1 Is -- my question is: What is the
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- 2 Canadian Zinc plan prior to the final design and
- 3 construction of the pond in terms of additional
- 4 investigation, placement of additional instrumentation,
- 5 to make sure that current design that proposed is going
- 6 to be working for the site?
- 7 MR. DAVE HARPLEY: Dave Caughill, did you
- 8 answer that -- did you hear that question?
- 9 MR. DAVID CAUGHILL: Yes. It's Dave
- 10 Caughill with Golder Associates. Yes, I did hear the
- 11 question.
- 12 Yeah, prior to final design we will do
- 13 additional investigation of that north slope, including
- 14 additional drilling to investigate the extent of the clay
- 15 layer in that north slope where the contact is with the -
- 16 the overburden and the rock at the north side of the
- 17 slope. And, further, kind of all -- all around
- 18 investigation further laterally on either side to make
- 19 sure we -- we know the extent of all the overburden
- 20 including the qual. air (phonetic) prior to final design.
- 21 And that will include installation of additional
- 22 piezometers and slope in kilometers at that time.
- 23 MR. DAVE HARPLEY: Dave Harpley. I just
- 24 wanted to added -- add more comment to that reply. It is
- 25 our understanding that the preliminary design that's

- 1 being prepared and provided to you at this point confirms
- 2 that the north slope can be stabilized with a combination
- 3 of removal of overburden on the slope itself and
- 4 placement of a fill apron in the base of the pond, over a
- 5 portion of the pond, and also the placement of a
- 6 buttress. And in addition to that, maintenance of a
- 7 minimum water level in the pond to act as an additional
- 8 buttress.
- 9 So the question is not can the north slope
- 10 be stabilized, the question for us is more how much we
- 11 need to do in order to confirm that it's stable. And
- 12 what we intend to do is to do more investigation not to
- 13 further confirm that it's stable but more to optimize the
- 14 design for stability.
- 15 We would like to, if possible, maximize
- 16 the storage volume in the pond and also, if possible,
- 17 reduce the minimum water level required to provide that
- 18 stability. But we haven't done enough work at this point
- 19 to -- to make those adjustments without confirming that
- 20 we're not affecting the overall stability.
- 21 MR. RAMLI HALIM: Okay. So basically I -
- 22 I don't have any more comments on that one, I just
- 23 wanted to get some information regarding the additional
- 24 investigation so that you can proceed with your one (1)
- 25 design and try to optimize what you mentioned.

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1 And the next question is about a catchment
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- 2 pond. Perhaps if you can provide a little bit details
- 3 for us here about the catchment pond in terms of the
- 4 operation capacity. But also I'd like to know a little
- 5 bit more about what's -- what's the catchment pond being
- 6 constructed on? Is it -- it has -- has it an impervious
- 7 liner in it or is the pond is being inspected and doing
- 8 one (1) of the various type inspection to make sure that
- 9 it can contain water as per water requirements? That it
- 10 going to stay there until it going to go back into the
- 11 creek.
- 12 MR. DAVE HARPLEY: Dave Harpley. The
- 13 first point I want to make is the compa -- catchment pond
- 14 is already built. It exists already. And also, the --
- 15 the pond dykes, as with all the dykes and berms along the
- 16 site, are inspected annually.
- 17 As far as modifications to the catchment
- 18 pond, we are proposing to line the pond. This is to
- 19 ensure that we have a secure control and containment
- 20 situation because the pond will be used for discharge of
- 21 treated water. And we've indicated that we want to have
- 22 the ability to stop discharge to the environment in the
- 23 event that there's an upset of -- of any case.
- The -- we're not -- we're not relying on
- 25 any particular volume of storage requirement in the

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1 catchment pond. We just simply want the opportunity to
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- 2 have a final collection point and -- and the ability to
- 3 stop discharge. So we have not estimated the volume in
- 4 the catchment pond simply because we don't need a
- 5 specific volume.
- 6 MR. RAMLI HALIM: Okay. Actually, I -- I
- 7 don't have anymore question related to the water storage
- 8 ponds. I was just wondering if somebody else, other
- 9 parties, have some questions, specifically. Because I
- 10 have other question related to flood protection dykes but
- 11 perhaps I should stop here now just in case somebody else
- 12 has other -- the same question.
- 13 THE FACILITATOR: Thank you. Are there
- 14 other questions related to the storage pond or catchment
- 15 pond, either from the floor or on teleconference?
- 16 MR. FONS SCHELLEKENS: This is Fons
- 17 Schellekens, Natural Resources Canada.
- 18 Yeah, on the waste storage pond. I was
- 19 wondering if you could tell us if the -- the design
- 20 values for the -- or the design of the water storage
- 21 pond, if it's incorporated extreme weather events. So --
- 22 such as extreme rainfall, extreme snow melt, especially
- 23 with regards to the stability of the berms and dykes.
- 24 MR. DAVE HARPLEY: Dave Harpley. I'll
- 25 answer what I think I can answer and maybe Dave Caughill

- 1 will chip in.
- I'm not exactly sure what you're referring
- 3 to but -- because I think there's a couple of different
- 4 things in there, but in terms of the ability of the
- 5 storage pond to retain peak precipitation and snowfall
- 6 events. I believe we covered that yesterday. And we
- 7 answered at that time that you can see from a 1 metre
- 8 freeboard at maximum operating level, which we're
- 9 unlikely to be at for any significant period during the
- 10 operation. I think that demonstrates that there's an
- inherent ability to store peak events without any
- 12 particular issue.
- 13 If you're referring to stability of the
- 14 dykes in terms of magnitudes of floods, that was the
- 15 discussion we just had in terms of the elevation of the
- 16 riprap and the flood magnitudes that we discussed at that
- 17 time.
- 18 Did that answer the two (2) components of
- 19 your question?
- 20 MR. FONS SCHELLEKENS: Mostly, I think.
- 21 Then related to that, I would like to know if the design
- 22 took also into account -- so you -- you mentioned that
- 23 the water storage pond was designed based on the 1:10,000
- 24 year flood event, I would like to know if that
- 25 incorporated climate trends.

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1 MR. DAVE HARPLEY: Dave Harpley. The
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- 2 original pond was designed based on the maximum probable
- 3 flood. Subsequent work has determined that, by
- 4 correlation with regional staging -- stations, that flood
- 5 magnitude is comparable to a 1:10,000 return period --
- 6 year return period flood.
- 7 So that was the design basis for the --
- 8 for the flood events.
- 9 MR. FONS SCHELLEKENS: Okay. Perhaps I
- 10 should restate it. I -- I would like to see, say, some
- 11 diagram or some -- some graph how that 1:10,000 flood
- 12 event was determined. And it could be that you have
- 13 already provided it but I haven't found it.
- 14 THE FACILITATOR: Thank you for that
- 15 question. We'll give Canadian Zinc a moment to find a
- 16 appropriate response.
- 17 MR. ALAN TAYLOR: It's Alan Taylor, just
- 18 while Dave's looking for that info. You were asking
- 19 about precipitation. We intend to install diversion
- 20 ditches around the -- the circumference, or close to the
- 21 circumference, of the pond and there would be minimal
- 22 catchment for precipitation. And the size of the pond
- 23 itself, we don't anticipate that to be an issue.
- 24 MR. FONS SCHELLEKENS: Yeah. Well, that
- 25 -- that is helpful but actually just from -- I would say,

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1 to give us confidence about -- yeah, about how -- how --
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- 2 yeah, if -- if you have used climate trends and if you
- 3 have looked at that at all. I can't mention -- so you
- 4 can plot the precipitation, the precipitation data on
- 5 probability paper and then determine the 1:10,000 year
- 6 event.
- 7 Usually in precipitation data or
- 8 temperature data, any weather data, we can see trends.
- 9 And you can filter out those trends because they will
- influence the other 1:50, the 1:100, the 1:500 year
- 11 events. And I would say it's, these days, standard
- 12 practice that climatic trends are incorporated in the
- 13 design. So, yeah, that's -- that's the background why
- 14 I'm asking.
- 15 MR. DAVE HARPLEY: Dave Harpley. I
- 16 believe the 1:10,000 estimate was contained as an
- 17 appendix to our project description report, but it's also
- 18 given in the DAR addendum and Appendix C.
- 19 MR. FONS SCHELLEKENS: Okay. I will have
- 20 a look at that and see if that answers my question.
- 21 Otherwise, I may come back to it.
- 22 THE FACILITATOR: Thanks very much. Do
- 23 we have further questions from parties on that topic?

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25 (BRIEF PAUSE)

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1 MR. RAMLI HALIM: Okay. I guess the next
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- 2 is -- set of question is related -- I'm not quite sure,
- 3 are we going to go to the waste rock pile first or we
- 4 going to be flood protection dyke? I just have a very
- 5 small question on the flood protection dyke. Okay, I'm
- 6 going to do the flood protection dyke first.
- 7 And the question is -- is basically for
- 8 more clarification of confirmation. There are no
- 9 references in any of the documents for possible winter
- 10 ice cover effects on water levels within the Prairie
- 11 Creek. In some of the location in Northern Canada,
- 12 winter ice cover formation or spring ice jams can
- 13 actually exceed open water flood events. I just want to
- 14 find out if Canadian Zinc can provide or confirm that the
- 15 potential does not occur at the Prairie Creek site.
- 16 UNIDENTIFIED SPEAKER: Yeah. Sorry.
- 17 Could you repeat that question?
- 18 MR. RAMLI HALIM: Okay. Basically, I
- 19 just want to find out is, could you confirm that the
- 20 potential of spring ice jam or ice cover, winter ice
- 21 cover formation, doesn't happen at Prairie Creek. That -
- 22 that it actually don't. Because some of the area when
- 23 you have a creek or river, in the wintertime there is
- 24 some ice jamming and the water level has come up very,
- 25 very high. And I was wondering if this is not a case

- 1 during the spring when they start melting.
- MR. ALAN TAYLOR: Yes, it's Alan Taylor
- 3 here. Well, we don't have any hard data with that. We
- 4 do have data with the fifteen (15) odd years of
- 5 experience being on the property and we've never actually
- 6 encountered such a situation.
- 7 MR. RAMLI HALIM: Okay. The next
- 8 question is -- is also about the flood protection dyke.
- 9 Is -- the Canadian Zinc in -- indicated that the BC
- 10 guideline for flood protection dyke will be used and is
- 11 based on 1:200 year flood plus freeboard point five (5)
- 12 or 2.9 metre. The two hundred (200) year flood was
- 13 estimated by Hay and Company, it's on Appendix C or D of
- 14 the -- I believe that's the Addendum Report of DAR. And
- 15 it says that that's related to -- to a flow of 200 metre
- 16 cubic -- cubic metre per second. And in Appendix Q of
- 17 the Can. Zinc responses mentioned about occurrence of
- 18 2006 flood, which is higher than the one in 1977, which
- 19 was reported as being -- having a flow of 187 cubic metre
- 20 per second. In the 2006 flood the report I think was
- 21 prepared by HC. They're using an estimate, you're saying
- 22 a Hacwas (phonetic) software, and the flood is equivalent
- 23 to between 200 to 400 cubic metre per second.
- 24 Knowing that this flood happened in 2006
- 25 with a flow of between 200 to 400 cubic metre per second,

- 1 would accept -- accepting the BC guideline raise a
- 2 concern here as the designed flood was only 1:200 years
- 3 and the flood in 2007 already had a higher flow than
- 4 estimated for the 1:200 years.
- 5 MR. DAVE HARPLEY: Dave Harpley. I
- 6 believe Hay and Company were indicating that they
- 7 believed a 1:200 return -- year return period is the
- 8 appropriate design consideration. That was, at the time,
- 9 in response to questioning in the Phase III environmental
- 10 assessment.
- 11 In terms of the applicability, the 1:200
- 12 number, again, I believe this is a moot point because we
- 13 know that the riprap is designed for a much higher flood
- 14 magnitude, so I don't really see the relevance of the
- 15 question.
- MR. RAMLI HALIM: Okay, so, basically,
- 17 the -- I assume that the freeboard requirement is -- is
- 18 above the -- what happened -- happened in 2007 because in
- 19 the design you do add a freeboard at, I believe, 2.5
- 20 metre, so that .5 metre is adequate so that the 2007 is
- 21 not overtopping that flood protection dyke, is that
- 22 correct?
- 23 MR. ALAN TAYLOR: It's Alan Taylor here.
- 24 The 2007 flood event you refer to, I was personally there
- 25 and we did do some measurements of the height of the

1 flood and there was still more than a couple of metres of

- 2 armour above that flood.
- MR. RAMLI HALIM: Okay, well, I -- I
- 4 guess that's what basically my -- my question is, just to
- 5 confirm that the one 1:200 year flood design, you're
- 6 adding .5 metre on top of it. And when you're talking
- 7 about the difference between one (1) to two thous -- two
- 8 hundred (200) year and one (1) to two -- two -- ten
- 9 thousand (10,000) year flood, the difference in terms of
- 10 increase of crest is not fairly much, and that's, well,
- 11 perhaps covered by the -- by the freeboard that you
- 12 already designed, .5, and that -- for that reason, that
- the 2000 flood, there is no overtopping.
- Okay, I guess the next question, it's just
- 15 a quick one, has the riprap actually been designed for
- 16 the flood type or basically it's already placed, so
- during inspection and doing the flood you make -- just
- 18 make an observation that the size of riprap is okay.
- 19 Like some of them is -- maximum was 2 metre, I believe,
- 20 and some of the area happen to have point 8 metre. But
- 21 has that thing actually been calculated, or it's just ba
- 22 -- basically a matter of experience?
- 23 MR. ALAN TAYLOR: It's Alan Taylor here.
- 24 The riprap that you refer to is armour along the -- the
- 25 dyke system, what was in place and originally set in

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1 place in 1982, not quite completed when they walked away,
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- 2 but it -- it provided more than adequate armour for
- 3 twenty (20) odd years of protection before we had a
- 4 assessment of it.
- 5 And we just recently, over the course of
- 6 the past two (2) years, we have repaired some of those
- 7 sections and we have actually completed some of those
- 8 sections, and those calculations of the riprap diameter
- 9 were based on actual measurements in the hydraulic system
- 10 there.
- 11 MR. RAMLI HALIM: I guess probably I'm
- 12 basically finished with the question for this. I just
- 13 want to get the opportunity to forward about this if I
- 14 have any question about the flood protection dyke.
- 15 MR. NATHEN RICHEA: Hi, it's Nathen
- 16 Richea with INAC Water Resources. I just had a question,
- and it's more of a clarification really than anything.
- 18 So for the flood protection dyke, I think you mentioned
- 19 that during the 2000 -- or in 2007 there was a flow event
- 20 that was about a -- a few metres below the crest of the
- 21 dyke. Was it like a metre or a metre and a half?
- 22 MR. ALAN TAYLOR: It's Alan Taylor here.
- 23 The -- reference is just to the armour and not the dyke
- 24 itself.
- 25 MR. NATHEN RICHEA: Okay. Thank you.

- 1 It's Nathen Richea, INAC, Water Resources. Do you -- I
- 2 guess, to get -- to get to the point, do you know what
- 3 the return period was estimated for the flood event in
- 4 2007?
- 5 MR. ALAN TAYLOR: Alan Taylor here. No,
- 6 we don't.
- 7 MR. NATHEN RICHEA: Thank you. It's
- 8 Nathen Richea, INAC, Water Resources. I'm just thinking,
- 9 as part of our assessment, it would be kind of good to --
- 10 to use that sort of as a -- a level, because it was --
- 11 the facilities onsite were able to withstand that flood
- 12 level, and I'm just curious to see if we could sort of
- 13 get a return period for that flow level. And then we can
- 14 use it as part of our assessment. I wonder if -- if
- 15 that's possible, or...
- 16 MR. RAMLI HALIM: This is Ramli Halim
- 17 with Hatch. I have -- when the flood event happened in
- 18 2007, in Appendix Q they mention about flow rate of two
- 19 hundred (200) to 400 cubic metre per second. And on
- 20 Appendix C of Hay and Company report they do some
- 21 calculation of 1:10,000 year return of flood, and they
- 22 mention about a flow of 450 cubic metre per second. Some
- of them was 500 cubic metre per second. So I guess,
- 24 probably, if -- probably you can answer your question
- 25 that the 2007 flood is a maximum 400 cubic metre per

- 1 second. So the return period would be less than
- 2 1:10,000. I don't know if that help.
- MR. NATHEN RICHEA: Nathen Richea, INAC,
- 4 Water Resources. No, that's good. Thank you for that.
- 5 That's kind of where we were sort of going, trying to
- 6 assess. That -- that will definitely help us in the --
- 7 in our assessment, so thank you.
- 8 THE FACILITATOR: Thank you. Further
- 9 questions on the topic of the water source pond, or flood
- 10 protection dyke? If not, we'll move on to waste rock
- 11 pile.
- 12 Do I have questions from parties on the
- 13 waste rock pile?
- 14 MR. RAMLI HALIM: Okay. This is Ramli
- 15 Halim with Hatch, a consultant to the Review Board. This
- 16 is about a waste rock pile. I was wondering if you'd be
- 17 able to provide the maximum design flow for the Harrison
- 18 Creek, because it was mentioned doing -- I guess this is
- 19 also related to the information that you are going to
- 20 design your flow to make sure that the ditches and the
- 21 diversion ditches is going to hand -- can handle the --
- 22 the flow that going to happen from the end of the mine to
- 23 perpetuity, basically.
- 24 So I'm just wondering, I noticed yesterday
- 25 during the discussion that Harrison Creek, it's not a big

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1 catchment area, and -- and you men -- even mentioned that
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- 2 there is possibility that water flow is going to be very,
- 3 very minimal. If you can probably provide that comments,
- 4 please?
- 5 MR. DAVE HARPLEY: Dave Caughill...?
- 6 MR. DAVE CAUGHILL: It's Dave Caughill
- 7 with Golder Associates. I guess to the point of
- 8 clarification, the waste rock pile is in a side channel
- 9 to Harrison Creek. It's not in the Harrison Creek
- 10 channel itself, valley. So I'm not sure if --
- 11 MR. DAVE HARPLEY: Yeah, I think he
- 12 understands that.
- 13 MR. DAVE CAUGHILL: -- catchment to that
- 14 site valley is relatively small and very rarely runs free
- 15 water, just water in the -- that runs within the coulee
- 16 and within that valley there's very little surface water.
- 17 I'm not sure if that -- does that answer your question?
- 18 MR. DAVE HARPLEY: Partly. He's looking
- 19 for what consideration we've given to the limited
- 20 catchment.

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22 (BRIEF PAUSE)

- 24 MR. DAVE CAUGHILL: Dave Caughill with
- 25 Golder Associates. We will have, in the design, channels

around the waste rock pile to divert any water from going

- 2 over or through the pile and divert that to Harrison
- 3 Creek.
- 4 MR. RAMLI HALIM: Yes, my question is,
- 5 when you -- at the end of the mine you're going to
- 6 provide a difference in channel, you have to size the
- 7 lock so make sure that water course is going to -- not
- 8 going to start eroding the -- the portion of the waste
- 9 cover, waste rock pile.
- 10 And my question is: Do you have
- 11 information at this time, or perhaps it's something that
- 12 you're going to be collecting during the operation of the
- 13 mine, to try to -- to get those information, how much is
- 14 flow going to be during that period so that you can
- 15 actually design the size of -- or sizing in the riprap
- 16 and ditches properly?
- 17 MR. DAVID CAUGHILL: Dave Caughill, with
- 18 Golder. Yes, we would -- we would proceed during --
- during operations to measure the flows that are there, to
- 20 design the riprap protection of the pile, and to design
- 21 the drains during that time period. And, very likely,
- the drains will be something like a french drain, which
- 23 allows water to flow but doesn't -- doesn't soak up with
- 24 time.
- 25 MR. RAMLI HALIM: Okay, the next question

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1 is -- this is also for the final design. I think there
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- 2 is a kind of insufficient reply to the Mackenzie Valley,
- 3 their Review Board request 1.3, in which the question is
- 4 related to the potential of raised water table.
- 5 The -- I'm talking about the local water
- 6 table behind the collection pond as a result of spring
- 7 freshet or -- and -- and frozen pond which can elevate,
- 8 or the localized water table within the stockpile.
- 9 This scenario must be checked. And I
- 10 wonder whether you did the stability analysis using waste
- 11 groundwater table for a local condition at a time when
- 12 the -- the collection pond is frozen and water start
- 13 melting and then kind of backing up against the waste
- 14 rock pile.
- 15 MR. DAVE CAUGHILL: It's Dave, with
- 16 Golder. It is our opinion that the -- you know, the --
- 17 the waste rock pile will be free draining, and -- and we
- 18 do not envision ice to build up within the waste rock
- 19 pile during operations. So we didn't desi -- we didn't
- 20 do a design with an elevated water table because we don't
- 21 believe it'll exist that way.
- 22 MR. RAMLI HALIM: Okay, so you basically
- 23 doesn't believe that taken -- there's a potential backup
- 24 of water because the pond still -- I assume that,
- 25 probably, in the wintertime the -- the collection pond

- 1 probably freezes over and some water that's going to be
- 2 frozen, and when you start spring freshet there going to
- 3 be some kind of a backup.
- 4 But I would -- my other question is
- 5 perhaps do you have enough factor of safety in the
- 6 stability analysis that you're probably not going to
- 7 concern about the potential raise -- raising of the water
- 8 table.
- 9 Is that another assumption that you can
- 10 make?
- 11 MR. DAVE HARPLEY: Dave Harpley. Before
- 12 Dave Caughill answers, I think the assumption that there
- 13 will be frozen water in the seepage collection pond is
- 14 incorrect. The collection pond will be empty because the
- 15 seepage from the prior winter period will have been
- 16 removed either by pipeline to the mill or by borehole to
- 17 the underground. So the pond should be available for any
- 18 freshet.
- Any further comment, Dave?
- 20 MR. DAVE CAUGHILL: Yes, Dave Caughill,
- 21 with Golder. Yes, I agree that the pond will be
- 22 maintained empty, especially near the end of the season,
- 23 and that any water that freezes in the waste rock pile
- 24 would also drain as it thaws, so I don't -- I don't
- 25 foresee an elevated pore pressure scenario.

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1 MR. RAMLI HALIM: Okay, I guess that's
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- 2 basically the answer that I want to hear because I think
- 3 that answered the question. So if -- if you actually are
- 4 putting that pond empty because probably it makes sense
- 5 at the end of the -- of the summer season, and
- 6 there won't be any water there, so if the -- when they
- 7 start melting the snow and everything start moving, I
- 8 guess probably that's a correct answer. That kind of
- 9 answered my question about that one.
- 10 Okay, just the last question is -- it's
- 11 actually the same, the first one (1) is related to the --
- 12 our prediction of the stream flow, and I believe that you
- 13 mention already that you're going to do some measurement
- 14 to make sure that on the final stage on the reclamation
- 15 that you're going to be able to design the diversion
- 16 ditches accordingly, so that you don't have any problem
- 17 with the motion in the -- in the waste stock pile area.
- 18 Is that correct?
- 19 MR. ALAN TAYLOR: Yes, it's Alan Taylor
- 20 here. That is basically correct. We -- we don't have a
- 21 lot of data, because it's such an intermittent and
- 22 limited tributary, but that can be readily collected as
- 23 the operation proceeds.
- 24 MR. RAMLI HALIM: I don't have any other
- 25 questioning related to the waste stock pile, and I just

1 want to find out if there's other party that want to ask

2 the same question.

3

4 (BRIEF PAUSE)

5

- MR. NATHEN RICHEA: Hi, it's Nathen
- 7 Richea with INAC Water Resources. I just had a question
- 8 about the waste rock pile. In the document that
- 9 discusses the waste rock pile, it indicates that there
- 10 will be monitoring conducted during pre-stripping, or
- 11 whatever preparation works are necessary for the footing,
- 12 or the foundation, I guess, for the pile. And during
- 13 those investigations you will also be assessing for --
- 14 the potential for permafrost to -- to exist, I guess, in
- 15 the -- in the foundation area.
- 16 I was just wondering if someone can
- describe what actions will occur if permafrost is found
- in the footprint of the waste rock pile and -- and, I
- 19 guess, what are some of the implications if permafrost
- 20 occurs in the area, or in the footprint of the waste rock
- 21 pile?
- 22 MR. ALAN TAYLOR: It's Alan Taylor here.
- 23 The base of the -- of the waste rock pile, where it lies
- 24 right now, is the focus of numerous drilling, just to
- 25 define the mineral resource. And we have not located any

- 1 permafrost in -- in that area at this time. And that's
- 2 based on numerous holes in there. And the overburden is
- 3 ver -- is not that thick in there.
- 4 MR. NATHEN RICHEA: Thank you. It's
- 5 Nathen Richea, INAC Water Resources. So I guess that's
- 6 a, yes, you'll be doing investigations as you go to look
- 7 for permafrost, because I think that's part of your
- 8 document. And then if you find permafrost, what
- 9 potentially could you be doing to address any concerns?
- 10 MR. DAVE HARPLEY: Dave Harpley. I think
- 11 what Alan just said is that we've done the investigation
- 12 and there is none. That -- that material will also need
- 13 to be removed to provide a suitable footing. It's a very
- 14 small amount of information. It's localized to the tow
- 15 (phonetic) area of the pile itself. The majority of the
- 16 pile footprint is exposed rock. So I think we can safely
- assume that permafrost will not be an issue in this
- 18 location.
- 19 MR. NATHEN RICHEA: Thank you. It's
- 20 Nathen Richea, INAC Water Resources. Yeah, I -- I guess
- I -- the only reason I was bringing it up is because the
- 22 documentation says that there is potential for permafrost
- 23 in the region and they will be doing monitoring as they
- 24 go. I was just curious to see what they would do if they
- 25 found it. So I'm not sure if I got the response there,

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1 but that's okay. Thanks.
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- 2 MR. ALAN TAYLOR: It's Alan Taylor here.
- 3 I might add to the database there that we have, it's not
- 4 just boreholes, but we have numerous roads cross-cutting
- 5 the area, which go down to bedrock and so far they
- 6 haven't revealed any signs of any permafrost there.
- 7 THE FACILITATOR: Thanks for that
- 8 question and response. Any further questions on waste
- 9 rock pile either in the room here or on teleconference?
- 10 MR. GLEN GROSKOPH: It's Glen Groskoph
- 11 (phonetic) with Environment Canada. Could I maybe get
- 12 back to you shortly?
- 13 THE FACILITATOR: Yes, how shortly?
- 14 MR. GLEN GROSKOPH: I don't know, probably
- 15 five (5) minutes.
- 16 THE FACILITATOR: Okay. We'll come ba --
- we'll -- we will take a ten (10) minute coffee break
- 18 right now and we will turn to your question in ten (10)
- 19 minutes. So ten (1) minute break and return at about
- 20 twenty (20) to. Thanks.
- 21 MR. GLEN GROSKOPH: Thank you.
- 22
- 23 --- Upon recessing
- 24 --- Upon resuming
- 2 5

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1 THE FACILITATOR: Mr. Harpley, could I
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- 2 ask you to introduce some of your personnel, please.
- 3 MR. DAVE HARPLEY: On the telephone is
- 4 Frank Palkovits, who's our paste backfill engineer, and
- 5 also Bill Rozeboom, for Northwest Hydraulics. He's a
- 6 hydraulic engineer. Bill was -- has been responsible for
- 7 looking at the -- the riprap on the -- the dike and the
- 8 berm, and the repair of that, and also, his company
- 9 prepared the conceptual design of the outfall and did the
- 10 estimation of the size of the plume, mixing plume
- 11 downstream.
- 12 THE FACILITATOR: Thank you. It's Chuck
- 13 Hubert with the Review Board. Prior to the break we had
- 14 a request for a question from a party on the
- 15 teleconference with respect to the waste rock pile. I'd
- 16 like to go to that question now. Please proceed.
- MR. GLEN GROSKOPH: Yes, Glen Groskoph,
- 18 thank you, with Environment Canada. And I quess it -- I
- 19 went through my notes to try to dig out what I had. And
- 20 I guess it kind of comes back to -- when I read the IS,
- 21 there was a section there that highlighted that there was
- 22 an acute lethality test that was conducted on the, I
- 23 guess the effluent or the pond water, and it was found to
- 24 be acutely lethal.
- 25 And I'm just wondering if you could maybe

- 1 explain a bit more, or maybe what the observed source of
- 2 that toxicity, and if it could be from some of the waste
- 3 rock piles or what that might be from.
- 4 MR. DAVE HARPLEY: Dave Harpley. We --
- 5 we covered this on day 1, I believe, but the toxicity is
- 6 related to the process water. It has nothing to do with
- 7 the waste rock pile.
- MR. GLEN GROSKOPH: I'm sorry, I wasn't
- 9 able to participate on day 1. Do you guys have a
- 10 contingency? If you do have, you know, ongoing problems
- 11 with the quality of the processing water in terms of the
- 12 early -- if it continues to be lethal?
- 13 MR. DAVE HARPLEY: Dave Harpley. At this
- 14 point we're proposing to do further testing of the
- 15 process water during startup. And we plan to store that
- 16 water and not release it until such time as we've
- demonstrated that it's -- that the discharge is not
- 18 toxic.
- 19 THE FACILITATOR: Thank you for that
- 20 response, Dave. Do you have a question specific to the
- 21 waste rock pile, which is the subject of discussion at
- the moment, please?
- MR. GLEN GROSKOPH: No, sorry, I don't.
- THE FACILITATOR: Thanks. With that --
- 25 do we have further questions on waste rock pile?

- 1 Anybody? If that's the case, I'd like to move the
- 2 discussion on towards the underground paste backfill. As
- 3 the developer has noted, there is a consultant on the
- 4 teleconference that is available to answer questions on
- 5 that issue. So please, any questions?
- 6 MR. RAMLI HALIM: Ramli Halim, Hatch,
- 7 consultant for the Review Board. The first one (1) is
- 8 related to -- just -- I just want to get clarification
- 9 from -- from Canadian Zinc. In the document, on page
- 10 163, section 6.3.1, fourth paragraph, it was mentioned
- 11 that there is a cyclone going to be used in the process
- 12 to separate tailings into coarse and five portion in
- 13 which the tailing, the fine tailings will go into the
- 14 tailing ponds.
- 15 I just want to confirm that this has
- 16 actually been scrapped or deleted from the -- from the
- 17 process now. It's the DAR, page 163, section 3.3.1 --
- 18 6.3.1, fourth paragraph.
- 19 MR. DAVE HARPLEY: Dave Harpley. We're
- 20 just reviewing what it says, but I've -- I -- I'm
- 21 thinking that this refers to the original intention and
- 22 it's not the current intention. It certainly was the
- 23 original intention to cyclone and send fines to the -- to
- 24 the large pond, but we've replaced that with the backfill
- 25 solution.

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1 MR. RAMLI HALIM: Okay. So on the next
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- 2 there is questions about the -- in the flow -- the flow
- 3 process seat, I don't know, you want to refer to the DAR
- 4 on page 189. There's a figure of six point eight (6.8).
- 5 I think that's perhaps the -- one of the sheet that
- 6 probably was come up on the screen yesterday.
- 7 There is the de-slime process on the -- on
- 8 the process. I believe that the de-slime process was
- 9 added for a lead carbonate flotation circuit to increase
- 10 the metal recovery. What is the chemical physical
- 11 property of the slime's produce and quantities and is
- 12 that actually going to go back in -- going back into the
- 13 paste backfill mix, as was shown in that diagram?
- 14 UNIDENTIFIED SPEAKER: You're looking at
- 15 the lead carbonate de-sliming circuit. The de-sliming
- 16 circuit going back to filter -- thi -- thickening
- 17 infiltration, I'm not quite sure what the question is.
- 18 MR. RAMLI HALIM: I just want to be sure
- 19 that those -- what is being produced from the de-sliming
- 20 unit and whether that's going to introduce additional
- 21 chemicals, and I want to be sure that it's actually go
- 22 back into the tailings when they be going underground,
- 23 it's not going to go somewhere else, is that correct?
- 24 MR. BYARD MACLEAN: That's correct, it's
- 25 going back underground. Byard MacLean speaking.

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1 MR. RAMLI HALIM: Okay. And the next
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- 2 question I have is this is related to the Canadian Zinc
- 3 response to the question from the Review Board, 7.1 and
- 4 7.2, regarding water bleed which come up in the further
- 5 questions.
- The samples from 2009 show lower bleed
- 7 values when you compare them with the one (1) sample
- 8 taken in 2005. It is understood that the final
- 9 modification will be required to reduce the bleed to zero
- 10 perhaps authentically as opposed to a hydraulic fill,
- 11 paste backfill, should behave like a paste with no access
- 12 water.
- 13 Would this be achieved using the tailings
- 14 at Prairie Creek without increasing slime, or could you
- 15 provide those information, because the value that
- 16 provided in the test samples come up talking about 10 to
- 17 15 percent of water bleed, and my concern is about the
- 18 chemical constituent out of -- that going to go mix with
- 19 the mine water?
- 20 MR. DAVE HARPLEY: Frank, did you get
- 21 that question?
- 22 MR. FRANK PALKOVITS: Yes, I did. I'm
- 23 just going right back to my notes. Yeah, this is Frank
- 24 Palkovits. The -- the water bleed tests that are
- 25 typically done in a laboratory are really to simulate a

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1 real logical performance of tailings without cement. So
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- 2 that gives us a good impression of what is on the upside
- 3 if there is no cement and it relates much to the pipeline
- 4 and/or surface disposal if that was a requirement.
- In this case, it's not the -- the --
- 6 that's not what's going to happen. In this -- what we
- 7 typically do then is we add cement to an underground
- 8 backfill. And in underground backfill the paste cemented
- 9 releases next to zero water at all. It's almost a ver --
- 10 it's -- it's almost essentially dry. And mar --
- 11 remarkable difference between hydraulic fill and paste
- 12 fill, hydraulic barricades to the bottom of the stove.
- 13 You could see lots of water being exuded.
- 14 On a paste backfill system there are often
- 15 times where there's -- it's sufficiently dry that you can
- 16 kick up dust at the front of a barricade. Now that's not
- 17 all projects, but the quantity that comes from paste is
- the water that's retained is usually used up by the
- 19 cement hydration.
- 20 MR. RAMLI HALIM: Ramli Halim, with
- 21 Hatch, consultant to the Review Board. The next question
- 22 is leaching of metal as one placed backfill into
- 23 underground -- into groundwater, this is a long-term
- 24 issue.
- 25 Will paste degrade over time in term of

1 strength and durability, to stay as a block of impervious

- 2 to a groundwater flow?
- 3 In Appendix H of Canadian Zinc responses
- 4 show that the paste backfill is a solid block of low
- 5 permeability mass in which only the boundary area will be
- 6 subjected to the leaching process. Paste backfill has
- 7 very low string, low binder content.
- 8 And my question is: Will the paste block
- 9 breaks down, cracks or degrades over a long period of
- 10 time? We're talking a hundred years or so. Paste
- 11 analogy is only thirty (30) years old. Perhaps the
- 12 hydraulic backfill was much longer, perhaps over fifty
- 13 (50) years.
- 14 Are there any precedents that show that it
- 15 will not degrade with like weak concrete that's going to
- 16 be if you submerge in water over a long time.
- 17 MR. FRANK PALKOVITS: Interesting
- 18 question. I -- I think we're looking at a couple of --
- 19 of things, and there's -- and I'm not a hydro geologist,
- 20 but in a -- in a relative sense, the paste backfill,
- 21 poured underground, is there not to degrade generally for
- 22 a mine backfill in a mining operation.
- 23 Degradation upon mine closure as you
- 24 related is more about groundwater flows. And I think
- 25 that's a question that -- that is probably better

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1 responded to by others. But I would say that -- that --
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- 2 that generally the low permeability, low conductivity of
- 3 a paste is -- is that much lower than that of the
- 4 surrounding rock mass to -- to mining operations.
- 5 In this particular tailings, we have not
- 6 tested for extremely long durations, and nobody can test
- 7 for those durations, but we do know of a -- a number of
- 8 operations that have gone through similar testing and --
- 9 and demonstrated that the low conductivity is -- does
- 10 support the mining activity, and mitigates some of the --
- 11 the flow as far as I know.
- 12 So I think -- and maybe it's just as well
- 13 to have someone in a hydro geological aspect refer to
- 14 that.
- 15 MR. DAVE HARPLEY: Dave Harpley. Just to
- 16 add to that, on closure, the -- the backfill will be
- 17 completely confined, so there's basically nowhere for it
- 18 to go in terms of breaking down. But perhaps more
- 19 importantly from a water perspective, Robertson
- 20 GeoConsultants' studies suggest that 99.9 percent of the
- 21 groundwater movement will occur in the fractured rock
- 22 mass around the backfill mix and might actually contact
- 23 the backfill mix.
- 24 MR. RAMLI HALIM: Ramli Halim with Hatch.
- 25 Yes, I guess so basically in the analysis that done by

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1 Robertson Geotechnical (sic), that the company of the --
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- 2 of the -- of the portion of the paste backfill mass that
- 3 is going to affect it by the leaching process, basically,
- 4 on the outside to interface. And that's the reason that
- 5 they are -- the -- the modelling shows the -- the amount
- 6 of potential leaching is much, much less than they
- 7 initially anticipated.
- 8 I think in the first guess it was about 10
- 9 percent. And in fact, it's going to be much, much
- 10 smaller. However, if you consider that there is
- 11 potential crack in the paste, in the long term or
- 12 degradation perhaps, those numbers are going to raise
- 13 again, although perhaps still going to be reading that 10
- 14 percent.
- This is just basically my comments about
- 16 that one. The next question is --
- MR. FRANK PALKOVITS: One (1) clarifying
- 18 to that, one (1) clarifying section to that. The -- the
- 19 -- the paste backfill, even after long durations, does --
- 20 does not really set up as hard as the concrete. And so I
- 21 think the notion of a crack is maybe, from a -- from a
- 22 concrete actually cracking whereas the paste retains a
- 23 malleable and a deforming aspect, almost like an
- 24 unsaturated soil in a sense.
- 25 So there will not be any significant

- 1 cracks as you may see in a concrete.
- 2 MR. RAMLI HALIM: Ramli Halim with Hatch.
- 3 Okay. If there is no crack, probably -- could you pos --
- 4 possibly explain a little bit more? Perhaps is the
- 5 potential of shrinkage on this space or is this paste has
- 6 been designed so that it won't actually reduce in volume
- 7 so that it creates some kind of a spaces or voids, or
- 8 even crack that induced by -- not by -- it's not a crack
- 9 induced similar to a weak concrete, but it's going to be
- 10 because of a shrinkage.
- 11 MR. FRANK PALKOVITS: And so the -- the
- 12 formulation that was put forth for this project contains
- 13 a large degree of the aggregate. And like a concrete,
- 14 the aggregate prevents shrinkage to a very, very large
- 15 extent. Paste backfill as itself, even without the
- 16 aggregate, undergoes shrinkage much less than a hydraulic
- 17 fill. So in terms of the best available technology, this
- 18 would support something of -- of much less shrinkage.
- 19 Furthermore, the -- the mining methodology
- 20 of cut and fill, because you're always filling on top of
- 21 previous fill, so any shrinkage that may have occurred
- 22 through some form -- through whatever systems, will be
- 23 compensated by the next layering of fill being applied.
- 24 And it's only in the very, very end of the
- 25 mine life that -- or in those particular last sections of

- 1 mine that there may be some voids that may be less.
- 2 However, typical mining practices with paste can achieve
- 3 100 percent filling, whereas other mining -- other
- 4 backfilling methods can't. So again, I think this is the
- 5 best available technology to mitigate any of those
- 6 concerns.
- 7 MR. RAMLI HALIM: Okay. The next
- 8 question is perhaps a very quick you'll be able to answer
- 9 this. I just want to have a summary of -- based on the
- 10 2005 and 2009 testing, I -- I assume that at this time
- 11 there is a current plan in terms of what kind of mix
- 12 that's going to be used as an initial.
- 13 I know that's going to go to a final
- 14 design and my -- final adjustment in the field, there
- 15 are going to be two (2) different kind of mix, and
- 16 perhaps if you can explain that, which one (1) and what
- 17 kind of strength and the binder content, and the bland
- 18 mix, and also the slum for these mixes that you actually
- 19 propose.
- 20 MR. FRANK PALKOVITS: Okay. Essentially
- 21 the -- the amount of binder is -- is set by the
- 22 requirement to sustain a backfill that -- that main --
- 23 that is there to maintain the mining operation. And so
- the binder could vary over -- from 1 percent up to 10
- 25 percent, depending on the nature of the particular stope

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1 that's being mine, and how it is sequenced between
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- 2 previous and future stopes, of course, and also the size
- 3 of the ore body at any one (1) particular location.
- 4 As a minimum to prevent what we -- what is
- 5 termed liquifax and that is if there was no cement in the
- 6 tailings, and you want it to be self-supporting, some
- 7 learned people in the fields of liquifax can consider
- 8 about 100 kPa as the minimum. And so that would be a
- 9 target.
- 10 The -- the slump typically would be
- 11 anywhere from possibly 6 1/2 to 7 1/2 inch slump upwards
- 12 to a 10 inch slump, and maybe -- maybe more so, depending
- 13 on distances from the plant and the pumping. And it is a
- 14 trade off from one (1) point of pumping pressures,
- 15 economics of -- of pumps and -- and binder.
- So there's a -- there's a range that a
- 17 mine needs to operate within to maintain its economic
- 18 performance, but also ensure the integrity of the
- 19 backfill.
- 20 The -- the various mixes, we can increase
- 21 the amount of aggregate, or decrease the amount of
- 22 aggregate depending on what's available at the time and
- 23 what strengths are required. And -- and furthermore, the
- 24 amb -- the ambition here is to try to maximize the
- 25 tailings actually going into the underground rather than

- 1 a surface disposal. So we have a number of opportunities
- 2 to make sure we get the tailings underground and then
- 3 maybe by reducing the aggregate, when and where possible.
- The binders that are available, there have
- 5 been a number of tests, and there may be more available,
- 6 but certainly the binders that are locally available are
- 7 considered appropriate for the project.
- 8 So as to mine may go into production or
- 9 when it goes into production, there is always a role for
- 10 optimization, and there are times to reduce the binder or
- 11 change the binder, and change the mix recipes.
- 12 MR. RAMLI HALIM: Ramli Halim with Hatch.
- 13 The -- the -- the strength of the mix, I believe the --
- 14 the upper portion is -- usually have a higher strength,
- because they're going to use for traffic.
- 16 Is that correct?
- MR. FRANK PALKOVITS: Yeah, the -- that -
- 18 that could have a higher -- a higher percentage of --
- 19 of cement in order to give a bearing capacity, although
- 20 that can also be modified by just putting waste rock on
- 21 top of the fill, and thereby saving the -- the amount of
- 22 cement being utilized.
- So there are a number of -- of
- 24 opportunities that the mine can use to allow good traffic
- 25 ability.

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1 MR. RAMLI HALIM: Ramli Halim with Hatch.
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- 2 I have just -- I have just a few more -- a very short
- 3 question, I guess. The next one (1) is about -- I just
- 4 want to check that -- are you thinking about using an
- 5 ordinary potence cement or something more specialized
- 6 like surface resisting?
- 7 And the second one (1) is: I assume that
- 8 during the development of the final environment for the
- 9 mixed design -- for the placement that you're going to --
- 10 are you going -- thinking -- also thinking of using a
- 11 different kind of binder other than cement?
- 12 MR. FRANK PALKOVITS: Well, the -- there
- 13 are different binders available, as mentioned. Within
- 14 the -- the Edmonton region there are flash available and
- 15 those are known to be fairly good, where sulphides do
- 16 occur. Plus during a swag we had attempted to try that.
- 17 The economics of bringing that into site is probably not
- 18 supported, just because there isn't any local glosphorant
- 19 (phonetic) swag available.
- 20 But the ordinary portland cement source in
- 21 Edmonton does not appear to be economic, although -- and
- 22 it was tested. But the -- as combinations are -- are
- 23 available, as well. I -- I think there's -- there are
- 24 still opportunities to -- as the mine gets working again,
- 25 to -- to continue to optimize and see what else is

- 1 available as time goes on.
- 2 MR. RAMLI HALIM: Yeah, I guess --
- 3 actually I have two (2) questions here, that's going to
- 4 be short. What is the concern related to the use of
- 5 truck and pipeline from combination as opposed to the
- 6 continuous pumping? Are Canadian Zinc only not able to
- 7 produce a mixed proportion using the tailings without
- 8 avoiding a high pressure on the pump pipeline, and all
- 9 the high water bleed from higher slump?
- 10 MR. FRANK PALKOVITS: No, it was a -- it
- 11 was a -- it was an economic tradeoff. Larger and larger
- 12 pumps, higher and higher pressures in the pipelines, the
- 13 further and further you go from the actual pump. And so
- 14 there's a power consideration.
- 15 As well, there's potential for a back
- 16 haul. And the other thing we considered were pumps
- installed within the mine so that we could actually
- 18 consider using the booster pumps. That as a notion, I
- 19 think that both have a degree of -- of usefulness. I
- 20 think once you get into the operation it -- it may
- 21 change, as well.
- The slump control can be managed from a --
- 23 from a very thick paste, a very -- to a more loose paste.
- 24 However, as you go from a thick paste to loose paste your
- 25 binder consumption goes up considerably.

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1 So again, this is just an economic
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- 2 tradeoff as to when to use trucks, when to use pumps, and
- 3 when to alter the slump.
- 4 MR. RAMLI HALIM: Ramli Halim with Hatch.
- 5 Thanks very much for your responses. I don't have any
- 6 other question.
- 7 THE FACILITATOR: Thank you. Do we have
- 8 any questions with respect to tailing space backfill
- 9 underground, tailing space backfill from people on the
- 10 floor? If the answer is no, and it seems to be, we'll
- 11 proceed with our next topic --
- 12 MS. KRISTIE TARR: Oh, I'm sorry, I -- I
- 13 missed my queue. I was -- I'm muting. It's Kristie Tarr
- 14 (phonetic) from Natural Reserves of Canada. I just have
- 15 one (1) question for Frank Palkovits about the mine
- 16 backfill.
- 17 THE FACILITATOR: Please, proceed.
- 18 MS. KRISTIE TARR: Okay. It's just in
- 19 regards to the Appendix I where you responded to my
- 20 Information Request. And all the answers were
- 21 sufficient. I just had one (1) question about the -- the
- 22 fact that the process water wasn't used in the laboratory
- 23 tests, and that there -- there doesn't seem to be a plan
- 24 to do any with the process water, and your response was
- 25 that the -- there would be no significant loss of

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1 strength expected from using the process water rather
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- 2 than tap water that must have been used in the lab tests.
- 3 And I was just wondering if you had done
- 4 any pH or other tests on the processed water that would
- 5 lead you to believe that the processed water won't
- 6 degrade the strength.
- 7 MR. FRANK PALKOVITS: Based on the water
- 8 testing from lead zinc operations, and from other -- our
- 9 similar projects, we haven't seen strength degradation
- 10 being largely controlled by the water chemistry directly.
- 11 It's more of the -- the constituents within the tailings.
- 12 There is also an opportunity, once the
- 13 plant starts operating, to recheck that and make sure
- 14 that that's -- that's not the case. If there is some
- 15 strength loss that may be attributed to the water that
- 16 can be compensated either by changing the water mix, or
- 17 changing of the binder consumption.
- 18 We've -- we've done some tests on other
- 19 projects looking at the water quality, and particularly
- 20 on thyo (phonetic) salts and other combinations. And
- 21 they, to date, have not provided significant changes in
- 22 strength.
- MS. KRISTIE TARR: Okay. Thank you.
- 24 THE FACILITATOR: Thank you. Are there
- 25 follow-up questions from parties on the teleconference or

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in the room?
 3
                         (BRIEF PAUSE)
 5
                    THE FACILITATOR: Thank you. We'll move
     on to our next agenda item. They're sort of grouped in a
 6
     number of topics, and parties can speak to any one (1) of
     them. I suppose it's manufacture, fuel storage and
 8
 9
     reagent storage.
10
                    MR. DAVE HARPLEY: So Frank can leave us?
11
                    MR. FRANK PALKOVITS: Okay. Thank you
12
    very much.
                   THE FACILITATOR: No. No. There's a
13
1 4
    hand waving.
                   MR. DAVE HARPLEY:
15
                                      N \circ .
                   THE FACILITATOR: Please stay on the
16
17
    line.
18
19
                         (BRIEF PAUSE)
2 0
                    MR. NATHEN RICHEA: Sorry, it's Nathen
21
     Richea, INAC Water Resources. We didn't have a question
22
2 3
     specific to paste backfill, but we did have a question
2 4
     that might need someone on the phone, if he's on. All
2 5
     right. Thanks.
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1 MS. ROCHELLE DRUMM: Yeah. I have to
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- 2 leave -- this is Rochelle Drumm from WESA, and I'm
- 3 leaving shortly, and I -- okay. Rochelle Drumm from
- 4 WESA. I have a comment and it relates to closure. I
- 5 know that's not on the agenda at this moment, but I'm
- 6 leaving and I just thought I could put that through now
- 7 if that's fine?
- 8 The concern I have is that based on what
- 9 has been presented in the DAR so far, I feel like the
- 10 level of groundwater characterization at the site is
- 11 insufficient to accurately assess post-closure impacts to
- 12 Prairie Creek and to Harrison Creek.
- 13 The reasons I have for this is that the
- 14 groundwater characterization that is presented in the DAR
- 15 has -- is based on a simplified groundwater model, as
- 16 well as many assumptions on the hydraulic conductivities
- of the units that play a significant role in the
- 18 groundwater flow model.
- 19 Using these assumptions may have been very
- 20 useful in the design of the water management system which
- 21 allows for a lot of flexibility in the treatment capacity
- 22 and also in the amount of effluent discharge, but -- so
- 23 you have a lot of control over the mitigating impact to
- 24 the environment.
- 25 But during post-closure when you won't

- 1 have those controls in place I feel that the fact that
- 2 you have made many assumptions and this has been handled
- 3 with estimating low and high values and then proposed
- 4 closure, I don't think that would give us an accurate
- 5 estimate of the impacts.
- 6 The other reason I have is that when you
- 7 compare the existing site conditions with the plume that
- 8 has already been generated from previous mining at the
- 9 site, you have a plume from the mine that extends right
- 10 to Prairie Creek, and you look at the limited amount of
- 11 data there and compare it to the predictions that were
- 12 made in the dark for post-closure, a lot of the
- 13 observations don't agree with what your case is for not
- 14 having an impact during post-closure.
- 15 For example, for post-closure, the DAR
- 16 reports that there will only be impact during winter
- 17 conditions and extreme low flow creek for zinc, lead, and
- 18 cadmium. Yet some of the chemistry tables that are
- 19 presented in the DAR show that you have in Prairie Creek
- 20 an exceedance of zinc at 27 micrograms per litre in
- 21 September when there are moderate creek flows.
- 22 So they're moderate flows, not low creek
- 23 flows, and it's during the fall and not in the winter.
- 24 Also, the -- in the DAR it says that you will also have
- 25 cadmium possibly and lead during the winter season during

- 1 low creek -- low creek flows, yet we -- there's a
- 2 monitoring well that's located down gradient from
- 3 Harrison Creek, 200 metres, right on the bank of Prairie
- 4 Creek, and it has a cadmium level of .73 micrograms per
- 5 litre.
- 6 In the DAR they're saying that the cadmium
- 7 levels will be attenuated naturally and so that it
- 8 shouldn't be an impact. Yet here you have a monitoring
- 9 well with a cadmium concentration that is twelve (12)
- 10 times what the site-specific condition is and it is
- 11 likely to be discharging into Prairie Creek and it will
- 12 not -- what -- what you can tell from this is that
- 13 natural attenuation hasn't decreased the concentration of
- 14 cadmium sufficiently by the time it reaches the -- the
- 15 creek.
- 16 So those are my major concerns, and as a
- 17 result, I -- I think that the groundwater
- 18 characterization needs to be brought up a level where you
- 19 actually have measured values and to verify that your
- 20 model is -- is right. And that -- then you can assess
- 21 the impacts better for post-closure, as well as studying
- 22 what is currently happening at the site now with the --
- 23 with the dissolved metal plume.
- 24 MR. DAVE HARPLEY: Dave Harpley.
- 25 Firstly, I find it disappointing that this information

- 1 wasn't brought forward in the previous two (2) days when
- 2 our consultant was here. Secondly, I don't agree that
- 3 sufficient information and investigation has been
- 4 undertaken, because the large part of the studies
- 5 conducted by Robertson GeoConsultants was specifically
- 6 focussed on closure and demonstrating the lack of impact,
- 7 or significant impact from groundwater.
- 8 I would suggest that these concerns be put
- 9 into writing, or a call be made to our consultant to
- 10 discuss these issues and to -- to get the response that
- 11 is appropriate, as I'm sure there will be an appropriate
- 12 response.
- 13 What I -- it's also -- a number of the
- 14 points that you raised here, we did actually cover in the
- 15 two (2) days, and it seems that you've forgotten those,
- 16 but I distinctly heard our consultant say that the
- 17 particular welling question that you referred to, he --
- 18 he believes that there are two (2) possibilities for
- 19 sources of contamination of that well. Both of which are
- 20 related to current conditions, and neither of which would
- 21 be applicable in a closure situation.
- 22 So that's that part. You also completely
- 23 ignore any reference to the estimation of what the pre-
- 24 mine impact, natural impact was, or that we've estimated,
- 25 and how that compares to the post-mine prediction.

1 THE FACILITATOR: Do you have a followup

- 2 question?
- MS. ROCHELLE DRUMM: I do, yes. Your
- 4 consultant did mention that there may be different
- 5 sources for that existing contaminant plume, but one (1)
- 6 of them was through the MQV fault, and through Harrison
- 7 Creek alluvial aquifer, which is the model for post-
- 8 closure as well.
- 9 So there is a good potential that that may
- 10 be the -- the pathway that those contaminants are taken.
- 11 And the second comment I had was, did you mention that
- 12 the well -- what was your second comment about?
- 13 MR. DAVE HARPLEY: You were referring to
- 14 a particular well by the creek. And he distinctly said
- 15 that there -- he thought that there were two (2) possible
- 16 sources that he -- he believed were credible. Neither of
- 17 those were a relevant or closure scen -- scenario.
- He did say that there was a possibility of
- 19 recharge from the vein fault, but he didn't believe that
- 20 was the case.
- 21 MS. ROCHELLE DRUMM: Right. Well, hence
- 22 is why I think better groundwater site characterization
- 23 is in order.
- 24 Also, you mentioned that you did predict
- 25 pre-mining concentrations in the creek. But if you

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1 compare what you're seeing now in the creek to the pre-
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- 2 mining, like for this one (1) example in September 2008,
- 3 I think the prediction that you made in these tables in
- 4 J4 predicted about 8 micrograms per litre. Yet what
- 5 we're seeing in September 2008 is 27 micrograms per
- 6 litre, so it's three (3) times more. It just instills a
- 7 lack of confidence in these predictions.

8

9 (BRIEF PAUSE)

10

- 11 MR. DAVE HARPLEY: You're referring to a
- 12 September 2008 -- you mean in a report, or in an actual
- 13 measurement? Which particular measurement are you
- 14 referring to?
- 15 MS. ROCHELLE DRUMM: Rochelle Drumm,
- 16 WESA. It's table 34, in Appendix A1 of the DAR. And it
- 17 -- the sample was taken at PC2, Prairie Creek, downstream
- of the mill. There were two (2) samples taken, and both
- 19 of them report 27 micrograms per litre of zinc in
- 20 September 2008.
- 21 MR. DAVE HARPLEY: I'm -- I'm
- 22 somewhat puzzled as to how you correlate that with a
- 23 closure scenario, given that we have an existing
- 24 disturbed site.
- 25 MS. ROCHELLE DRUMM: My concern is that

- 1 there's a lack of groundwater characterization to -- to
- 2 properly explain what is currently occurring, and what
- 3 will occur post-closure. The model didn't include the
- 4 hydrostratigraphic (phonetic) units of the alluvial
- 5 aquifers. The hydraulic conductivities that were assumed
- 6 didn't -- weren't based on measured values in the field.
- 7 This amount of -- level of effort could be done to get a
- 8 better, accurate, a better model of what's happening with
- 9 the groundwater at the site, especially for post-closure.
- 10 MR. DAVE HARPLEY: Dave Harpley. I -- I
- 11 don't believe you're correct. I can't say for sure. I
- 12 believe our consultant considered all the data. I would
- 13 encourage you to contact him directly and find out that.
- 14 I will say, however, that the consultant has been fairly
- 15 clear that the investigation work needs to continue, and
- 16 we are in the process of doing just that.
- So it -- it's not that we're relying on
- 18 numbers that have been reported only at this point.
- 19 THE FACILITATOR: Thank you. Given that,
- 20 as you mentioned, the developer's consultant isn't
- 21 available today, I'd encourage the parties, INAC, and the
- developer, perhaps, to get together at some type of
- 23 meeting, a focussed meeting to discuss this and perhaps
- 24 prepare a report of the results and submit that to the
- 25 Board. That would be useful.

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1 MR. NATHEN RICHEA: Thank you. It's
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- 2 Nathen Richea, INAC Water Resources. I would take that
- 3 as -- yeah, we would like to work with you and your
- 4 consultant on the aspect that we're discussing. And I
- 5 guess, yeah, I guess I could just leave it at that.
- 6 That's the easiest part. I'll just leave it.
- 7 THE FACILITATOR: Thank you. We look
- 8 forward to the -- the results of that. Since we're on
- 9 closure and reclamation, can we continue with any
- 10 questions parties might have for the developer on that
- 11 subject?
- 12 MR. NATHEN RICHEA: Hi, it's Nathen
- 13 Richea with INAC Water Resources. I just -- I just have
- 14 an item that I thought I would discuss here. Of course,
- 15 INAC has its mine site reclamation policy. We do have
- 16 guidelines for preparing a closure and reclamation plan.
- 17 So I'd like to acknowledge Canada Zinc for preparing our
- 18 preliminary closure and reclamation plan.
- 19 The only thing I did want to touch on was
- 20 in the plan it currently states that closure criteria for
- 21 chemical stability will include monitoring in the
- 22 environment compared to the site-specific water quality
- 23 objectives. And we -- we would like to encourage that
- 24 going forward in this process.
- 25 But again, we -- we may have an issue with

- 1 post-closure environment and whether those can be
- 2 achieved. So it's part of, sort of, our impact
- 3 assessment, but we will work with -- we're happy that
- 4 Canada Zinc would like to meet with us to talk about our
- issue, and we'd like to bring that to everyone's
- 6 attention.
- 7 THE FACILITATOR: I hope everyone heard
- 8 that. All right. Thank you.
- 9 MR. DAVE HARPLEY: I'm just wondering if
- 10 there are any questions -- further questions for our
- 11 hydraulic engineer while he's on the phone, either to
- 12 deal with the -- the -- the armour in the dykes, or
- 13 indeed, the outfall in the mixing calculation. I
- 14 appreciate on the latter aspect that the parties haven't
- 15 had much time to consider it.
- 16 THE FACILITATOR: Indeed. Thank you.
- 17 The parties have had very little time to look at the
- 18 outfall document that you reference. However, if there
- 19 are questions that -- that the person -- person on the
- 20 teleconference may be able to respond to, please ask them
- 21 now. Okay. Thank you.
- 22 MR. PETER REDVERS: Peter Redvers. David,
- 23 perhaps you could -- he's hung up already, I wasn't quite
- 24 quick enough. Just in the summary there is a mention,
- 25 "a more complete description of the

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mixing analysis methods and assumptions
 1
 2
                       will be documented in a subsequent
                      letter report."
 3
                    Just an indication of when that would be
     available. If you could -- I don't know if you know
 5
 6
     that, but if you could find that out, that would be
     helpful.
                   MR. DAVE HARPLEY: Bill, are you still
 8
 9
     online?
10
                    MR. BILL GROSKOPH: Yes, I am.
11
                   MR. DAVE HARPLEY: Did you hear the
12
     question?
                    MR. BILL GROSKOPH: Yes, we -- we can do
13
1 4
     that with -- within the next week. We should be able to
15
     do that next week.
16
     --- UNDERTAKING NO. 25: For Canadian Zinc to provide
17
18
                                a more complete description
19
                                of the mixing analysis
2 0
                                methods and assumptions
2 1
22
                    THE FACILITATOR: Thank you for that
2 3
     response. Any further questions? Proceed.
                    MR. NATHEN RICHEA: Hi, it's Nathen
2 4
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Richea, INAC Water Resources. Just so -- just for the

2 5

- 1 record, and so that if there's nothing further or your
- 2 consultant can know -- I haven't been able to take a look
- 3 at the mixing in -- in any detail that I could ask
- 4 questions on, so I'm -- at -- at this point in time INAC
- 5 doesn't have any questions.
- THE FACILITATOR: Are there further
- 7 questions? Please.
- 8 MR. JAMIE VANGULCK: Jamie VanGulck,
- 9 Parks consultant. We also have not had a chance to -- to
- 10 review the -- the existing summary document that was
- 11 provided. It would be very helpful to see the -- the
- 12 full in-depth report when it becomes available and to be
- 13  $\,$  able to provide commentary and -- and followup questions
- 14 at that time.
- 15 It was initially noted that the range of
- 16 water quality parameters that were selected for the
- 17 analysis included five (5) water quality components and
- 18 with the followup information requests that were put out
- 19 yesterday there may be other components that are
- 20 necessary for water quality protection in the future.
- 21 THE FACILITATOR: Thank you. Do we have
- 22 further questions from people in the room -- or on the
- 23 teleconference? Okay. Party from NRCan please.
- 24 MR. FONS SCHELLEKENS: Yeah. I have -- I
- 25 have one (1) question, one (1) statement on the -- the

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1 mine site components. And the -- the first -- I'll --
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- 2 I'll start with the statement. The terms of reference
- 3 for the -- the project, the EA review, they -- they state
- 4 that considerations shall be given to -- to climate
- 5 trends, to -- to climate extremes, in the design, so it's
- 6 terms of reference section 3.3.7.3 and the terms of
- 7 reference section 3.3.2.8. And, unfortunately, I think
- 8 neither extreme events nor climate trends have been
- 9 incorporated in the design.
- 10 I had another look at what was provided by
- 11 the Proponent, which is the Hay Co. report with the
- 12 attachment from Cara Priestman and Associates (phonetic).
- 13 And that clearly shows that a climate trend was not
- 14 accounted for in flood design.
- 15 Also, the base data on which the -- the
- 16 flood -- the 1:10,000 flood was calculated, they are not
- 17 part of the Hay Co. report, so you cannot see the dots on
- 18 -- on the graph.
- I think it would be very helpful for us to
- 20 -- to have that, and I don't think it is -- it is very
- 21 difficult task or so to -- to put that together. So
- 22 that's my statement.
- 23 And the other one --
- 24 MR. DAVE HARPLEY: Before you -- before
- 25 you continue, I'm just wondering, Bill, do you have any

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1 comment on that?
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- 2 MR. BILL GROSKOPH: I'm -- I'm not quite
- 3 sure what the request is. The -- the only comment I
- 4 would offer is that the -- the climate change on the
- 5 short duration extreme events is extremely difficult to
- 6 predict.
- 7 When you get into the probable maximum
- 8 flood level of things, the probable maximum really
- 9 reflects a -- a limit which should not be affected by the
- 10 climate very much because it's the extreme out of all
- 11 possible conditions.
- 12 So by -- I -- I guess my two (2) comments
- 13 are if there's a specific request I'd like to comply, but
- 14 I'm not quite sure what the specific request is.
- 15 And -- and secondly, the -- the climate
- 16 change probably will not have any real impact on our
- 17 ability to quantify the specific recurrence interval or
- 18 specific magnitude of very extreme events.
- 19 MR. FONS SCHELLEKENS: Okay. I can make
- 20 it more specific then. So you have fourteen (14) years
- 21 of data for Prairie Creek, you have thirty-three (33)
- 22 years of data for the Flat River near the mouth, you have
- 23 thirty-four (34) years of data for the south Nahanni
- 24 River above Victoria Falls, and twenty-four (24) years of
- 25 data for the South Nahanni River above Clawson Creek

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1 (phonetic). What you can do is plot this data, so on a
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- 2 graph, and -- I am wondering if you have taken the
- 3 distribution to be a standard normal distributed -- yeah
- 4 -- or that you have considered a trend.
- 5 So -- and my suspicion is there is no
- 6 trend incorporated. So if you can confirm that. I know
- 7 it's -- it's hard to do, but it -- it would be good to
- 8 have that on record. If you can just tell me no -- no
- 9 climatic trend was taken into account, then I already
- 10 know more.
- 11 MR. BILL GROSKOPH: I -- I can confirm
- 12 that the frequency analyses are based on the data as --
- 13 as you have identified them and that no adjustment was
- 14 attempted for climatic trend.
- 15 THE FACILITATOR: Thank you for that
- 16 question and response. Do you have a further question?
- MR. DAVE HARPLEY: Can I ask a question?
- 18 THE FACILITATOR: Yes, you can.
- 19 MR. DAVE HARPLEY: Dave -- Dave Harpley.
- 20 I'm just wondering if consideration of the trend has any
- 21 real bearing on the outcome in terms of flood magnitude
- 22 and what we have as far as protection already on site?
- 23 MR. FONS SCHELLEKENS: Yes. Yes, it
- 24 does. If you see a climatic trend, and say you -- you
- 25 have -- you're getting higher and higher floods, so the --

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1 - the floods that occur -- the flood that occurred very
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- 2 recently was considered an abnormality, but if that is
- 3 part of a trend, then that is a big concern.
- So -- you know, I'll leave it at that.
- 5 MR. DAVE HARPLEY: And can I also ask why
- 6 this wasn't an Information Request?
- 7 MR. FONS SCHELLEKENS: This was in our
- 8 Information Request.
- 9 MR. DAVE HARPLEY: Can you tell me which
- 10 one (1)?
- 11 MR. FONS SCHELLEKENS: It's in NRCan 10.
- 12 It's NRCan 12. Yeah, that are basically it. And so both
- 13 of these things are followups based on your response to
- 14 those Information Requests.
- MR. DAVE HARPLEY: Okay.
- 16 THE FACILITATOR: Would you -- Chuck
- 17 Hubert, Review Board. Would you like to restate that
- 18 question while the developer reviews their response?
- 19 MR. FONS SCHELLEKENS: Okay. I'll --
- 20 I'll read it up:
- 21 "Please provide any further information
- 22 on the design values with respect to
- 23 extreme events, rainfall, snow melt --
- 24 snow melt, utilized for stability
- 25 analysis and design of diversion

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structures."
 1
 2
                    That as a followup of NRCAN 12. And as a
     followup from NRCAN 10:
 3
                       "Please provide additional
 5
                       clarification on the assumptions and
 6
                       the rationale for these assumptions
                       made, regarding the climate -- climatic
                       data utilized in design of project
 9
                       components and the impact assessments."
10
                    And as a second part to that:
11
                       "Please provide any additional
1.2
                       information on any analysis conducted
13
                       to determine the range in climatic
1 4
                       conditions for the project area, and in
15
                       particular, the determination of
                       extreme events that may occur."
16
                    MR. DAVE HARPLEY: Dave Harpley. I think
17
18
     we can probably resolve this by getting you together with
     Hank Irwin (phonetic) concerning the data further. You
19
     had another question?
2 0
                    MR. FONS SCHELLEKENS: Yeah, and that --
21
22
     that involves getting something -- getting something on
2.3
     the screen here so -- so I can read it up and be a little
2 4
     bit more specific. So if that's okay with you. Or --
25
     yeah.
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1 THE FACILITATOR: Please request which
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- 2 item you would like on the screen and we can discuss it
- 3 then.
- 4 MR. FONS SCHELLEKENS: On -- on my screen
- 5 actually so I can read it up.
- THE FACILITATOR: Okay. Please proceed.
- 7 MR. FONS SCHELLEKENS: It's -- it's
- 8 actually not a -- not a big contentious issue. It's --
- 9 it has to do with earthquakes, say, seismic hazard, and
- 10 the values for the design.
- 11 MR. DAVE HARPLEY: Is it something you
- 12 can verbalize for our geotechnical engineer?
- 13 MR. FONS SCHELLEKENS: And it's very
- 14 short. So we had an information request, NRCan three
- 15 (3). And the -- the request was: What were the ground
- 16 shaking levels estimated at the mine during the 1985
- 17 events and is there any evidence for active faulting near
- 18 the side. And a deterministic hazard assessment, in
- 19 addition to the standard prob -- probabilistic hazard
- 20 assessment, should be considered. And you responded to
- 21 that and our seismic hazard expert was pleased with the -
- 22 the -- the response.
- 23 Although he wanted to state that if the --
- 24 the deterministic hazard assessment values will not
- 25 necessarily be used in the design as suggested in the

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last sentence of your response. But if the probabilistic
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- 2 seismic hazard values are higher than the deterministic
- 3 then it is the probabilistic seismic hazard values that
- 4 should be used in the design analysis, as per the
- 5 building and dam codes and standards.
- But it's -- that's just a comment and I
- 7 assume that that would actually happen.
- 8 MR. DAVE HARPLEY: Dave, did you get
- 9 that?
- 10 MR. DAVID CAUGHILL: Yes. It's Dave
- 11 Caughill with Golder. Yes, I got that, and yeah, you
- 12 were correct. If -- if it determinic -- deterministic
- 13 hazard assessment results in -- in lower values then we
- 14 would use the -- the other probabilistic values.
- 15 MR. FONS SCHELLEKENS: Okay. Yeah.
- MR. DAVID CAUGHILL: That's the
- 17 confirmation you were looking for?
- 18 MR. FONS SCHELLEKENS: That's right. So
- 19 then -- then we are happy with that.
- 20 THE FACILITATOR: Thank you very much.
- 21 Any further questions on the topic of closure and
- 22 reclamation?

23

24 (BRIEF PAUSE)

2 5

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1 THE FACILITATOR: Thank you. We have a
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- 2 few minutes, about twenty (20) minutes, here before
- 3 David. I'd like to return briefly to our topic about
- 4 fuel storage, reagent storage, and explosives. If we
- 5 have questions from the floor or on teleconference,
- 6 please, we'd like to hear from you now.
- 7 MR. PETER REDVERS: Peter Redvers, Naha
- 8 Dehe Dene Band. I believe it was Natural Resource Canada
- 9 had a -- I'm trying to remember what session it was at or
- 10 where it was, that it indicated that if the -- with the
- 11 clear statement that there would be a -- a full explosive
- 12 manufacturing plant onsite, that there was a number of
- 13 permits and requirements that needed to be met.
- 14 And I'm just wondering if you could just
- 15 briefly go through that and just so that there's a -- I
- 16 guess some clarity and certainty from the community
- 17 perspective that that is an issue that is, or a -- a
- 18 facility, that will be fully regulated and properly
- 19 assessed prior to operation, construction, and operation,
- 20 and maybe some timing on that.
- 21 THE FACILITATOR: Again, our NRCan
- 22 participant respond to that?
- MR. DAVE HARPLEY: This is Dave Harpley.
- 24 Maybe I can help with that response. We've been in
- 25 communication with the relevant people at NRCan and we've

- 1 provided some information already, which has also been
- 2 put on the public record.
- 3 And we -- it's a subject they were still
- 4 working on in terms of -- with our explosives, probable
- 5 explosives contractor, to bring forward new data. But
- 6 I'm sure that NRCan will be fulfilling their obligations
- 7 in terms of the explosives plant.
- 8 We are already talking about the
- 9 requirements for permitting. Our contractor is well
- 10 aware of those requirements and we're in the process of
- 11 preparing the relevant applications for that process.
- 12 MR. FONS SCHELLEKENS: Fons Schellekens.
- 13 And I -- I should have stated "Natural Resources Canada,
- 14 the geological survey of Canada," because that -- that
- 15 makes it clear that I am not with the mining and --
- 16 mineral sector.
- So I -- I cannot speak for them
- 18 necessarily, but I will relay your question and will ask
- 19 them to get in touch with you if that's okay?
- THE FACILITATOR: Thank you very much.
- 21 Any further questions on this topic? Okay. To wrap up
- the morning agenda then, mine site component topics, I
- 23 guess since there's a couple minutes, is there any -- any
- 24 further questions then before our -- we wrap this up for
- 25 lunch?

- 1 MR. RAMLI HALIM: Ramli Halim with Hatch.
- 2 Actually I have another -- I don't know, perhaps it's too
- 3 late for person already left from Golder, paste
- 4 technology. There is a -- in the Golder report, appendix
- 5 12B, I think it was mentioned there are still some
- 6 concern in the design related to the filtering systems.
- 7 I believe this is more in the opera --
- 8 operation trying to optimize and -- and try to reduce the
- 9 costs. And I was wondering whether that things has been
- 10 resolved in -- in -- and Canadian Zinc already have a
- 11 plan for doing that final proposal mix for the -- for the
- 12 paste backfill?
- 13 MR. ALAN TAYLOR: It's Alan Taylor here.
- 14 Yes. We do intend to pursue this and -- with further
- 15 tests and the need for expanding and filtration will be
- 16 determined then.
- 17 THE FACILITATOR: Okay. Well, if that's
- 18 it. Thanks everybody for your questions and thanks to
- 19 the developer for their responses, and plus your team, as
- 20 well. That was much appreciated.
- 21 With that, we'll break for lunch and we
- 22 will continue with human environment topics, as described
- 23 on the agenda, in the afternoon and we'll get started
- 24 again at quarter to 1:00. See you then.

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1 --- Upon recessing
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2 --- Upon resuming

3

- 4 THE FACILITATOR: I'd just like to alert
- 5 parties to a small addition to the agenda. There's been
- 6 a request from Parks Canada to have a two (2) minute
- 7 closing statement and we will allow that after the
- 8 discussion under "Other Issues" for the technical
- 9 committee, and the developer, Canadian Zinc, will be
- 10 allowed an opportunity to respond to that. So that's a
- 11 change to the agenda.
- 12 Also, we will start this afternoon briefly
- 13 with a discussion from -- short discussion from DFO to
- 14 start things off.
- 15 I'd also like to mention scheduling for
- 16 the shuttle. There will be a shuttle leaving at 3:30, so
- 17 keep that in mind. And we'll announce something further
- 18 on that as we go ahead this afternoon.
- 19 So if we can have a brief question and
- 20 comment from DFO, please.
- 21 MS. SARAH OLIVIER: Sarah Olivier with
- 22 DFO. First off, apologies for backtracking in the agenda
- 23 but I just wanted to take this opportunity to speak to
- 24 and maybe clarify some of the outstanding information
- 25 requirements DFO has following yesterday's discussion on

1 the access road that I feel like I may not have been very

- 2 clear on.
- 3 I guess overall Canadian Zinc did provide
- 4 some good responses to our IRs both in the session and in
- 5 writing. But I think it's worth just clarifying that for
- 6 the record and, I guess, just to outline that some of
- 7 those information -- some of that information is required
- 8 for DFO during the environmental assessment.
- 9 So the first point that I want to clarify
- 10 was our information needs as it relates to water
- 11 withdrawal. As we discussed yesterday, DFO had asked
- 12 Canadian Zinc for an IR to provide exact locations and
- 13 estimates of water usage for the construction and
- 14 maintenance of the road. Canadian Zinc did identify one
- 15 (1) lake in particular, Mosquito Lake, that is a fish-
- 16 bearing lake, and said also that all the other water
- 17 sources would come from water courses, some of which are
- 18 also fish bearing.
- 19 We did also receive a rough estimate of
- 20 some of the water usage along the road. But as I
- 21 mentioned yesterday our protocol -- our -- DFO's water
- 22 withdrawal protocol does not include water courses, and
- 23 that potential impacts on fish and fish habitat would
- 24 still need to be assessed for all -- all water withdrawal
- 25 locations during the EA.

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1 So the main point that I want to clarify
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- 2 is that DFO would still require specific information on
- 3 locations of withdrawals, estimates of water usage and a
- 4 discussion on potential impacts of those withdrawals,
- 5 especially on over-wintering fish and fish habitat.
- 6 We would also like to see a discussion on
- 7 potential mitigation measures if appropriate and we feel
- 8 that that information should be provided as much as
- 9 possible during the environmental assessment.
- 10 The other point that I wanted to clarify
- 11 was related to crossings and the design of the road.
- 12 Yesterday, Canadian Zinc committed to providing DFO with
- 13 a conceptual design of the crossing, which includes
- 14 bridges and clear span structures, which is -- which will
- 15 be very useful to us. But DFO would also like Canadian
- 16 Zinc to include some information on how the design of the
- 17 road -- how the road and crossing design considered
- 18 erosion control methods.
- 19 So I know that Canadian Zinc had agreed
- 20 yesterday to develop a detailed sediment and erosion
- 21 control plan in the regulatory phase, which is fine, but
- 22 it's important not to confuse that with the information
- that's required for the impact assessment.
- 24 So to summarize that point, DFO would
- 25 still ask that Canadian Zinc provide a conceptual plan

- 1 for the road, with a discussion on how sediment and
- 2 erosion control measures were considered in the design.
- 3 Also, if Canadian Zinc could identify any
- 4 potential vulnerable sections where additional armouring
- 5 or stabilization may be required. I guess in particular
- 6 Funeral Creek where bull trout have been found.
- 7 So I think that -- those were the main
- 8 points that I just wanted to clarify. I know that we had
- 9 had this discussion but I think those were just things
- 10 that may have not been clear on the record. So thank
- 11 you.
- 12 THE FACILITATOR: Thanks for that
- 13 clarification. I'd like to proceed now with our agenda
- 14 items for the afternoon under Human Environment.
- 15 So socioeconomic and cultural matters and
- 16 we can begin with those and if there's some overlap with
- 17 traditional land use and harvesting issues, we can
- 18 certainly accommodate that -- that whole general suite of
- 19 issues. So, please, any questions now is the time.
- 20 MS. KRIS JOHNSON: Hi. Good afternoon.
- 21 My name is Kris Johnson, I work for the Department of
- 22 Industry, Tourism and Investment with the GNWT.
- 23 We've -- we've put in several information
- 24 requests in regards to the socioeconomics and just before
- 25 we got into any of the details of some of the response

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1 that we received from Canadian Zinc, I just wanted to
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- 2 give them an opportunity, because some time has passed
- 3 since those Information Requests responses came out, to
- 4 maybe, for everybody's benefit, give an overview of the
- 5 approach that Canadian Zinc is considering for addressing
- 6 some of the socioeconomic matters related to the project.
- 7 MR. ALAN TAYLOR: Yeah, it's Alan Taylor
- 8 here. Perhaps I can give you a brief shot in time of
- 9 where we've been and -- and where we hope to go.
- 10 We've always had close ties with the
- 11 communities and identify the communities as critical
- 12 components to any successful project; hence, we've
- 13 engaged them as much as we can and we continue to do so
- 14 through to IBAs.
- 15 And it is our feeling that a successful
- 16 project reflects direct ties with the community and we
- 17 want to maximize the benefits and for -- for this project
- 18 to the locals. And while the terms of the negotiations,
- 19 the draft negotiations, with the IBAs are in confidence
- 20 right now it is, in general terms, towards that target of
- 21 -- of maximizing the benefits that accrue to the region
- from the project, both direct and indirect.
- Does that answer it in a nutshell?
- 24 MS. KRIS JOHNSON: I believe so. Kris
- 25 Johnson with the GNWT. So could you elaborate, I think

1 from the GNWT's perspective it's very important that the

- 2 local communities are the primary focus for maximizing
- 3 those opportunities, but where -- where their resources
- 4 are exhausted in some of the areas that they may not be
- 5 able to participate or provide the mine what they need,
- 6 how was Canadian Zinc planning to address some of those
- 7 socioeconomic matters across the NWT?
- 8 MR. ALAN TAYLOR: It's Alan Taylor. We
- 9 intend to maximize the benefits for the communities
- 10 through training programs and -- and direct arrangements,
- 11 business arrangements and such that reflect whatever the
- 12 operation and consideration is with certain aspects of --
- 13 of the -- of the mine. We recognize the limited
- 14 capacities of -- of some communities and such and we'd
- 15 like to enhance that through further education and
- 16 training. And we feel that that not only benefits the --
- 17 the region but it benefits the mine because it is -- we
- 18 anticipate a long-live mine here.
- 19 And -- it's Alan again, sorry. Our
- 20 consultant, Graham Clinton (phonetic) is here and joined
- 21 us, and he will be able to further elaborate on things I
- 22 hope too.
- MS. KRIS JOHNSON: Thank you. Kris
- 24 Johnson again, with the GNWT.
- 25 So I guess from the GNWT's perspective

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1 that, you know, what we would be looking for is that
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- 2 first and foremost primarily the objective would be to
- 3 maximize opportunities for those impacted communities and
- 4 that, you know what, the GNWT fully supports the process
- 5 of negotiating impact benefit agreements.
- Then the secondary objective would be to
- 7 maximize opportunities across the NWT.
- 8 So I think the -- the responses that we
- 9 got in the Information Requests last month really
- 10 focussed on the communities and the Impact Benefit
- 11 Agreements and that -- that helped us out a lot, and a
- 12 lot of those negotiant -- negotiations are confidential.
- 13 But we would like to see more of an analysis across the
- 14 NWT of what the capacity would be that could help the
- 15 mine, you know, employment, training, procurement,
- 16 contracting, and whatnot, that can't be met by those
- 17 communities through the Impact Benefit Agreements and how
- 18 some of those gaps can be filled and focussed in the NWT.
- So I'm wondering if you have any more
- 20 strategies as far as that goes or some insight, some
- 21 plans for doing some of that analysis?
- 22 THE FACILITATOR: Chuck Hubert with the
- 23 Review Board. Thanks for the question. We'll give the
- 24 developer a moment or two (2) to -- prior to responding.
- 25 MR. GRAHAM CLINTON: Hi there. Graham

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1 Clinton. First to apologize for being late; I didn't
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- 2 understand it was starting a little earlier this
- 3 afternoon.
- 4 Perhaps I can elaborate a little bit on --
- 5 on your question. Because you're right, the focus
- 6 definitely in those responses was the -- the study area
- 7 communities. Principally -- well, there's a number of
- 8 reasons why.
- 9 I guess one (1) that perhaps has not been
- 10 discussed to the -- to this point is that looking at the
- 11 -- the detailed expenditure list that the mine will --
- 12 will -- the list of expenditures on goods and services
- 13 the mine will undertake over its operational period. The
- 14 capacity within the study area Community's Business
- 15 Development Corporations is such that they may be able to
- 16 take care of the majority of those needs that we sort of
- 17 felt that the Territory was in a position to -- to
- 18 deliver.
- 19 So particularly in the areas of trucking,
- 20 road building, care and maintenance, catering, those
- 21 types of services, we felt that the study area com --
- 22 Community Business Development Corporations would be able
- 23 to manage those -- those types of contractors.
- 24 Extending beyond that, certainly there
- 25 would be -- there -- there's equal opportunity for -- for

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1 businesses outside of that study area to participate, and
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- 2 there's -- there are no -- certainly no barriers being
- 3 erected to prevent any -- any of those businesses from
- 4 participating over and above or before service companies
- 5 or goods -- good providers from -- from the provinces of
- 6 Alberta or -- or British Columbia.
- 7 So I think principally the message is that
- 8 we looked at the business capacity within the region and
- 9 felt that the majority could be met there, and it's -- I
- 10 don't think it will be until you get to the opera -- the
- 11 actual operational phase that you start to see what --
- 12 what gaps might exist, at which point you would certainly
- 13 explore the territorial business capacity before you --
- 14 you'd look to the south.
- 15 MS. KRIS JOHNSON: Thank you. Kris
- 16 Johnson with the GNWT. So is that -- if I'm hearing you
- 17 right that your -- you know, your first commitment of
- 18 course is to the communities in that local study area,
- 19 but that your second commitment would be to look to the
- 20 resources and the capacity in the NWT, and that that
- 21 would be your next level of commitment for filling some
- 22 of those gaps?
- MR. GRAHAM CLINTON: Yes, absolutely.
- 24 MS. KRIS JOHNSON: That's great. That's
- 25 -- that's exactly what we want to hear.

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1 So the next logical step, I guess, from
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- 2 our perspective would be to come to some kind of formal
- 3 agreement with Canadian Zinc for the life of the mine,
- 4 and including construction, operations, and remediation
- 5 on what those benefits -- or those opportunities would
- 6 be, and how the businesses and communities in the NWT can
- 7 participate in those opportunities. And laying out, you
- 8 know, a framework or some kind of agreement as to how we
- 9 can make those things a reality and how we can monitor
- 10 that those things are actually happening and, you know,
- 11 where there's issues arising, how we can work together to
- 12 try and solve some of those issues before looking outside
- 13 the NWT to address them.
- 14 So, is that something that Canadian Zinc's
- 15 interested in?
- MR. ALAN TAYLOR: It's Alan Taylor here.
- 17 That's precisely what we'd like to move ahead on, with
- 18 the caveat that the IBA arrangements that we come to
- 19 agree have precedence over anything and any arrangement
- 20 we have with GNWT here. We'd certainly like to work with
- 21 GNWT and -- and try to optimize and maximize things just
- 22 as you would.
- 23 MS. KRIS JOHNSON: Kris Johnson with the
- 24 GNWT. I think that's great, that's exactly what we're
- 25 looking for. I think the -- the communities that are

- 1 within that study area that are most impacted by the
- 2 project should definitely be given the priority and
- 3 that's where we'd like to see the focus and then the
- 4 broader NWT.
- 5 So, yeah, and we'd like to, you know, have
- 6 further discussions with you about some of the details of
- 7 what that agreement would include. I know we've had some
- 8 discussions with Canadian Zinc about some of the -- the
- 9 issues or getting some clarity on some of the points that
- 10 were made in the Information Requests, so I don't want to
- 11 get too far down into the details of those.
- 12 I think that, you know, we're -- we're
- 13 willing to work with the company to address some of the
- 14 issues that we've discussed previously related to
- 15 employment, and training, and pick-up points, and
- 16 reporting parameters, and indicators, so, I don't want to
- take up a lot of time as far as the details of those.
- 18 You know, I think the -- you know, so long
- 19 as the -- the primary focus is those impacted communities
- 20 in the NWT we can work within that framework to come up
- 21 to -- with an agreement that we're all happy and
- 22 satisfied with and that can meet our needs as to how the
- 23 GNWT can also help making this project a reality and to
- 24 the best benefit of the local communities and the
- 25 residents of the NWT. So I think -- no, I think that's -

- 1 probably, for now, concludes our questions.
- 2 MR. ALAN TAYLOR: It's Alan Taylor. Just
- 3 a comment on that. While you mention agreements or
- 4 arrangements are -- are -- and such, we -- we don't
- 5 object to such dealings.
- 6 However, I just -- we want to remind
- 7 everybody in the audience here that keep things in
- 8 perspective. We understand that there are socio-ec
- 9 agreements in place with other mines and it's hard to
- 10 compare in a lot of the cases. And I just want to get
- 11 that on the record.
- 12 THE FACILITATOR: Further response to
- 13 that?
- 14 MS. KRIS JOHNSON: Thank you. Kris
- 15 Johnson with the GNWT. And you're absolutely right. And
- 16 you know, we support and look at each project on a
- 17 project-by-project basis based on your abilities and
- 18 capacities and needs as well. So, in no way would we
- 19 compare you with the diamond mines. And that, you know,
- 20 what would come up would be something that's unique and
- 21 individualized for your project.
- 22 THE FACILITATOR: Thank you. Do we have
- 23 questions from any other parties? Mr. -- Mr. Redvers...?
- 24 MR. PETER REDVERS: Thank you. Peter
- 25 Redvers, Naha Dehe Dene Band. I wasn't going to ask some

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1 specific questions, but I thought it would be in the
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- 2 interest of the Board at this Hearing just to get an
- 3 update on how the Naha Dehe Dene Band is dealing with
- 4 some of the issues relating to socio-economics and also
- 5 traditional and also of value to, perhaps, some of the
- 6 regulators and -- or, those that have interests,
- 7 including the GNWT.
- 8 I'll deal with the traditional land use
- 9 and harvesting first. Initially, or early on, in the --
- 10 well, going a couple of years ago, anyway, not that early
- 11 in relation to the project which has been in the works
- 12 for a number -- quite a number of years.
- 13 When the Naha Dehe Dene Band decided to
- 14 engage in the -- through the EA process formally, one of
- 15 the first steps that it took was to have a Traditional
- 16 Knowledge assessment of the Prairie Creek Mine operation
- 17 carried out. And there was a fairly thorough review of
- 18 traditional rights and interests in the area that would
- 19 be encompassed by the -- the mine project. An
- 20 articulation of those and also, at least at a preliminary
- 21 level, an identification of where there may be impacts
- from the project operations, and with some preliminary
- 23 recommendations as how the community might want to have
- 24 those addressed.
- 25 As you are aware, a portion of that report

- 1 has been tabled with the Board, some of it in confidence,
- 2 but, certainly, the key, sort of, observations and
- 3 conclusions coming out of that are on the record.
- And some of the -- the key concerns have
- 5 really been the focus for the Naha Dehe intervention in -
- 6 in the EA, as I've mentioned.
- 7 The second thing that was done was two (2)
- 8 years ago now, I believe, was that the Band signed an MOU
- 9 with Canadian Zinc. And in that MOU there is a
- 10 recognition by Canadian Zink of Naha Dehe Dene Band
- 11 rights and interests in the area encompassed by the mine
- 12 operation -- proposed operation.
- 13 And, therefore, an intent to address that
- 14 through, particularly as Canadian Zinc has mentioned, the
- 15 negotiation of an IBA. And that process is actually --
- 16 I've been informed -- I'm not directly involved in that,
- 17 but nearing some completion there has been some very good
- 18 progress made on that.
- 19 And to some degree, that is certainly
- 20 viewed by the community as an accommodative measure, not
- 21 only in terms of addressing some of the impacts, but in
- 22 terms of accommodation in respect to potential impacts on
- 23 rights and interests.
- 24 There are some differing views on -- on
- 25 impacts that are -- are -- still exist and -- and

1 those will continue to be discussed in the community and

- 2 I'm sure will be addressed as this pro -- process
- 3 unfolds.
- In the -- one (1) of the things that the
- 5 community has not wanted to do, and Canadian Zink has
- 6 been informed of that, and it was, I think, a little
- 7 problematic, perhaps, from a Board perspective, and that
- 8 is the community didn't want to quantify land use.
- 9 They had indicated their interest in that
- 10 land area and that that documented interest, including
- 11 Section 35 rights was enough of a basis to lead to
- 12 negotiation of some accommodative measures directly with
- 13 the proponent.
- 14 So that's why that -- the -- the proponent
- 15 hasn't tabled, I believe, within the terms of reference
- 16 for the -- for the Developer Assessment Report. There
- was some requirement to table sort of quantitative
- 18 information on land use. And it was the community that
- 19 indicated that that was not the preferred approach.
- 20 In terms of where things are at with
- 21 respect to addressing traditional land use and harvesting
- 22 issues, the points that I've been raising on behalf of
- 23 the community the last through -- three (3) days really
- 24 speak to the outstanding concerns that would help address
- 25 that; one (1) being having control over road access and

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1 that's still in the works. And there are some steps that
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- 2 the community will likely take following this after I've
- 3 reviewed the -- the outcomes of this meeting with the
- 4 community. There are some steps or options that can be
- 5 taken.
- 6 As mentioned yesterday, there is an
- 7 interest in having involvement in wildlife management
- 8 planning, the development of the Wildlife Management
- 9 Plan, and there's definitely an interest in playing a
- 10 role in ongoing monitoring activities and there are a
- 11 variety of those.
- 12 Those will be discussed a little bit more
- 13 later on this afternoon in relation to the item
- 14 "Technical Committee" because the community has put
- 15 forward essentially two (2) options that have been
- 16 discussed with Canadian Zinc; one (1) being for the
- 17 community to have some independent environmental
- 18 monitoring capacity, and opportunities; that discussion
- 19 was also with INAC present.
- The second, which is likely preferred, is
- 21 for the Naha Dehe Dene Band to be involved in some sort
- 22 of a technical sort of monitoring oversight committee,
- 23 along with Canadian Zinc and other affected or involved
- 24 agencies for the life of the... So we'll discuss that
- 25 one (1) further; that needs to be addressed.

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1 So generally as we -- those issues get
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- 2 further addressed and there seems to be some mechanisms
- 3 in place to do that issues associated with traditional
- 4 land use and harvesting are -- are being addressed by the
- 5 community at a -- in way that they're reasonably
- 6 comfortable with at this time.
- 7 I will add a little -- with little more of
- 8 information on that as I move to sort of the
- 9 socioeconomic stream/cultural, of course, traditional
- 10 land use and harvesting is highly cultural but look more
- 11 at the community context versus the whole traditional
- 12 land use area context.
- As you certainly are aware, there -- there
- 14 was a critique of the socioeconomic analysis tabled with
- 15 the Board on behalf of the Naha Dehe Dene Band and
- 16 certainly one (1) of the -- the issues I think was that
- 17 was the lack of community specific data. And we also
- 18 recognize a response to that critique was tabled.
- 19 And certainly it's not our desire to get
- 20 into a discussion of the differing views on that because
- 21 what the community has chosen to do is to engage in an
- 22 community-based human resource and community economic
- 23 development survey that would help provide, from the
- 24 community's perspective, more specific data that the
- 25 community could then use to determine how best to ensure

- 1 full engagement with the project.
- 2 In -- in a nutshell, the survey is still
- 3 being finalized and actually will be -- the beginnings of
- 4 it will be carried out in a couple of weeks.
- 5 The overall intent of that I guess is to
- 6 identify potential barriers to engagement in the project,
- 7 and that includes educational and training and perhaps
- 8 cultural well-being barriers and then exploring measures
- 9 to overcome those barriers as a means to ensure that the
- 10 community and community members are able to take full
- 11 opportunity of the opportunities that are available. And
- 12 certainly there are quite a wide range of opportunities
- 13 that are presented by this project.
- 14 The community feels that its -- its
- 15 responsibility then to really look at how best to ensure
- 16 that it's able to fully engage and take advantage of
- 17 those opportunities in a way that -- that benefits it.
- 18 So the tool for that is -- is this -- initially this
- 19 human resource community economic development survey
- 20 which I might add is being co-funded by Education,
- 21 Culture and Employment and ITI of the GNWT, as well as
- 22 some -- a portion of IBA negotiations funding is going
- 23 towards that, given that there will be some information
- 24 coming out of that that will help with the implementation
- 25 of the -- the IBA once it is concluded.

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1 The results or at least a summary of the
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- 2 results of that survey will be tabled and the intent is
- 3 to complete that and have a summary available prior to
- 4 the community hearing. And then the further, I guess
- 5 discussion of some of the issues that were to be
- 6 discussed today, some of the socioeconomic, culture, and
- 7 land use and harvesting issues could then be more
- 8 appropriately discussed in the community context. It's
- 9 somewhat uncomfortable, I guess, to be talking about
- 10 those issues which really are community-based issues
- 11 sitting in Dettah, which is a long way from the Dehcho,
- 12 let alone a long way from the community of Nahanni Butte.
- 13 So it's preferred to have those
- 14 discussions in the community or to allow them to take
- 15 place at the -- at the community hearing, which we
- 16 understand is coming up in the relatively near future;
- 17 certainly in or around the Christmas period. So that's I
- 18 guess part of the reason also for not coming and really
- 19 getting into a whole lot of detail on some of the matters
- 20 here simply because the survey will provide further
- 21 information -- useful information from a community
- 22 perspective, discuss and address those issues, and, as
- 23 well, the IBA will be further advanced so there'll be
- 24 much greater clarity in terms of the commitments that
- 25 have been made in terms of some of the socioeconomic

- 1 benefits guaranteed to the community.
- 2 So, with that, I think that's -- hopefully
- 3 provides a -- a little bit of an update on -- on where
- 4 the community is with that, and I think the Board could
- 5 look to a more lively and -- and probably a more informed
- 6 understanding of those issues when it comes to the
- 7 community hearing and also through the summary that's
- 8 provided of the survey that's -- that is currently being
- 9 undertaken.
- 10 As well, as I'm assuming, although it will
- 11 be confidential, at least some indication of the kinds of
- 12 issues that have been addressed through the IBA, once
- 13 it's concluded.
- 14 THE FACILITATOR: Thank you for those
- 15 comments. I can assure you that the Board looks forward
- 16 to a community hearing in, hopefully, Nahanni Butte and,
- if not, Fort Simpson, but, certainly, in the Dehcho.
- 18 And -- and one (1) other question I have
- 19 for you is you mentioned that the survey that you
- 20 referenced would be completed prior to the Hearing.
- Does that mean November?
- 22 MR. PETER REDVERS: Peter Redvers, Naha
- 23 Dehe Dene Band. We're -- we're targeting having it -- a
- 24 summary done by the middle of October -- or, sorry,
- 25 middle of November. Yeah, certainly, we wouldn't want it

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1 to go any later than November, if we can possibly help
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- 2 it, because it will inform, not only the community
- 3 hearing, but there is already some discussions of
- 4 implementation planning relating to the IBA and it would
- 5 help to inform that as well, too, so.
- Now that I have the mic, it -- it is a --
- 7 I -- I will impress upon the Board an understanding of
- 8 the Naha Dehe Dene Band that there would be a community
- 9 hearing in Nahanni Butte.
- 10 And, so, I -- I would certainly impress
- 11 upon the Board the need -- the need to hold the Hearing.
- 12 Now, if there is a -- recognized a need for participation
- 13 and, certainly, waiting to be assured that the ice road
- 14 is open, might be advantageous and that would allow
- 15 people from the surrounding communities that want to come
- 16 in to Nahanni for that Hearing to -- to do so reasonably.
- 17 But it would be very beneficial, I guess,
- 18 to hold the Hearing in the community who -- that is
- 19 likely most impacted and most affected by this
- 20 development, and -- and who are eagerly wanting, you
- 21 know, to be heard and acknowledged and recognized by all
- 22 parties as -- as having a somewhat compelling, if not,
- 23 primary interest in this project.
- 24 THE FACILITATOR: Thank you. A response
- from the developer?

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1 MR. ALAN TAYLOR: It's Alan Taylor. I
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- 2 mean, our -- our roots go back a long ways with Nahanni -
- 3 over twenty (20) years ago -- and while we can talk
- 4 about this, I think we're here for the EA and the
- 5 questions and I'd much rather sort of focus our questions
- 6 on those in particular. If we can resolve things, to
- 7 move ahead in this -- in this forum, that would be most
- 8 helpful.
- 9 THE FACILITATOR: Thank you. Can we
- 10 proceed then with specific questions from parties to the
- 11 developer on socioeconomic and cultural -- and cultural --
- 12 sorry -- issues. Okay, I'll expand that then to
- 13 traditional land use and harvesting matters.
- 14 Any parties like to ask questions of the
- 15 developer on those issues?
- 16 Thank you. Also under Human Environment,
- 17 although it could have been placed in other segments of
- 18 the agenda as well is air quality.
- 19 Do we have -- okay, in the back there,
- 20 please. MS. AILEEN STEVENS: Hi. Aileen Stevens
- 21 with ENR. Yeah, I agree, air quality probably could have
- 22 been discussed with some other areas, because some of our
- 23 questions actually revolve around contaminant loading.
- 24 And, well, I guess it passes through the
- 25 air at some point. Anyways, thanks very much for the

- 1 responses to our IRs regarding the contaminant loading.
- 2 It makes a lot of sense to be using the Hefty bags.
- 3 Those definitely are a common practice for some ore
- 4 transport.
- 5 But just to clarify, I couldn't really
- 6 tell from the photos that were provided; these are the
- 7 Hefty bags that basically tie closed with shoelaces,
- 8 right; that type of thing, like, rope?
- 9 MR. ALAN TAYLOR: It's Alan Taylor here.
- 10 They're actually 3 to 4 tonne bags and they're -- they're
- 11 held together by straps.
- 12 MS. AILEEN STEVENS: Sorry, I -- I've
- 13 worked with Hefty bags before for sure, but where they're
- 14 sealed, are they heat sealed?
- 15 MR. ALAN TAYLOR: It's Alan Taylor. No,
- 16 they're not heat sealed, no. It's just the way they fold
- 17 back together, they stay -- self-seal up on a lift.
- MS. AILEEN STEVENS: Okay, I guess, then,
- 19 the -- the one (1) outstanding comment, then, from your
- 20 description of how you're going to prevent dust migration
- 21 and -- and tracking around would be the secondary
- 22 containment.
- 23 You've indicated that secondary
- 24 containment wouldn't be practical for using these bags,
- 25 but since they're not 100 percent sealed, I quess the

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1 only concern we have around is using the flatbed
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- 2 trailers. I guess the photo that you have of them on the
- 3 flatbed trailers, it shows that they're single stacked
- 4 and they're strapped down.
- 5 Is -- is that the intention, or -- because
- 6 the other -- the other photo that you guys provide to
- 7 show how they're going to be transported out of the bag
- 8 house is in a closed rail car with walls and a lid.
- 9 So which will actually be the case?
- 10 MR. ALAN TAYLOR: It's Alan Taylor here.
- 11 Actually, both will be the case because the bags will be
- 12 transported on the flatbeds from the mine site to the
- 13 railhead. And along -- along the way they will be
- 14 temporarily stored at the transfer facilities.
- 15 But when they get to the rail, then
- 16 they'll be loaded on the railcar, which will probably be
- 17 an open gondola-type car.
- 18 MS. AILEEN STEVENS: Okay, well, I quess
- 19 ENR and EC would still have the concern for -- in the
- 20 event of -- of spills, the winter roads are not like
- 21 paved highways, of course, and in the event there's any
- 22 issue like that, secondary containment for the bags would
- 23 be a concern.
- 24 And have you looked into using anything
- 25 other than flatbed trucks; just anything to contain the

1 bags in the event of a truck tipping over or in the event

- 2 of them being left outside to be exposed to the
- 3 environment, 'cause these bags can freeze together if --
- 4 if precipitation falls on them. And then when they're
- 5 lifted, I've seen the bags tear apart.
- 6 MR. ALAN TAYLOR: It's Alan Taylor here
- 7 again. I guess the secondary containment would be
- 8 considered the season itself and they're frozen, because
- 9 the concentrate has a 8 percent moisture component, so
- 10 it's more or less an iceblock inside that bag.
- 11 MS. AILEEN STEVENS: Ms. Aileen Stevens,
- 12 ENR. Well, I guess that brings up another question then.
- 13 It looks like the concentrate's going to be 80 percent
- 14 passing through 80 microns.
- 15 Is -- is that generally the size? Okay,
- 16 so that's a -- a silt. And, so, if you can achieve 8
- 17 percent moisture, that's still going to be a friable
- 18 material when it's frozen. So, unless -- I mean, maybe
- 19 you have conducted studies of these in -- in 4 tonne
- 20 blocks, and if you drop them on the ground they won't
- 21 shatter at all.
- 22 But my understanding of -- of silt in the
- 23 frozen state with 8 percent moisture would still be
- 24 friable. So if it fell off the truck, it would still
- 25 fall apart.

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1 MR. ALAN TAYLOR: It's Alan Taylor. But
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- 2 it -- it wouldn't fall apart to the point where there's
- 3 dust produced and such. It would be in -- in chunks or
- 4 whatever and -- and it's -- it's more than manageable
- 5 that way for a -- for a cleanup.
- 6 MR. DAVID HARPLEY: Dave Harpley. I
- 7 think we need to be specific between normal operations
- 8 and a spill contingency situation. Because it seems to
- 9 me you're talking about a -- a spill scenario rather than
- 10 the regular operating condition.
- 11 MS. AILEEN STEVENS: Actually, that's --
- 12 that's very true. Sorry, Aileen Stevens, ENR. Yeah, if
- 13 it's in the frozen state being transported down the road
- 14 and the bags have been cleaned off and they're tied as
- 15 tightly as they can be and strapped down, that's correct.
- 16
- 17 I wouldn't expect that there would be dust
- 18 flying all over the place. It would be a still -- a
- 19 spill contingency consideration, but that does still tie
- 20 into standard operations because it would involve
- 21 different transport techniques as opposed to a flatbed
- 22 trail -- trailer.
- 23 MR. DAVID HARPLEY: So I'm not sure what
- 24 the question is then.
- 25 MS. AILEEN STEVENS: Have you con --

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1 Aileen Stevens, ENR. Have you considered an enclosed
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- 2 truck rather than a flatbed trailer for transport in
- 3 order to contain it in the event of an incident?
- MR. DAVID HARPLEY: Yeah, Dave Harpley,
- 5 two (2) things. One (1) is, yes, we considered it and
- 6 quickly ruled it out because it's impractical in terms of
- 7 the quantity we have to move and the multiple loading and
- 8 unloading that we have to do.
- 9 And secondly, and more importantly, we
- 10 concluded that it wasn't necessary because of the
- 11 techniques we intend to adopt at the mine site to ensure
- 12 that the bags on the outside are clean. And that --
- 13 provided that they're secured and stay on the trailer,
- 14 there shouldn't be an issue of tracking along the
- 15 roadside.
- In addition, of course we're not just
- 17 going to rely on that -- that's our expectation. We
- 18 intend to do monitoring dust fall and of the roadbed
- 19 because the last thing we want is a trail of metals along
- 20 the road that we have to remediate as a -- at a future
- 21 time. So if -- if we happen to find out that our
- 22 assumptions are incorrect, then we'll have to re-visit
- 23 the issue.
- 24 MS. AILEEN STEVENS: Okay. Aileen
- 25 Stevens, ENR. I -- I quess, based on the conclusions

- 1 reached yesterday about the spill contingency planning,
- 2 I'll just be looking forward to seeing what's in there in
- 3 terms of this type of matter.
- I do have additional questions though.
- 5 Just with respect to your air quality monitoring -- or,
- 6 modelling, pardon me. The isoplus (phonetics) that were
- 7 provided as requested in the IR only indicated the areas
- 8 of expected exceedences and that doesn't -- that doesn't
- 9 display all the maximum anticipated dispersion and
- 10 deposition.
- 11 So I guess, you presumably don't have your
- 12 consultant here to discuss that, but it's just a simple
- 13 request, so.
- 14 MR. DAVE HARPLEY: It's Dave Harpley.
- 15 I'm trying to get him on the line right now, so just give
- 16 me a second.
- MS. AILEEN STEVENS: Thanks.
- 18 MR. DAVE HARPLEY: He's calling in, so
- 19 he'll be online in a second. So the -- the fellow
- 20 calling in is Chris Madland he's with Golder Associates.
- 21 They did the -- the air quality dispersion modelling.
- 22 Chris is more of a monitoring person. I'm hoping that he
- 23 can address the modelling as well, but that remains to be
- 24 seen.
- 25 MS. AILEEN STEVENS: Aileen Stevens, ENR.

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1 Sorry, is Chris on the line right now, or he's...
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- THE FACILITATOR: Chuck Hubert, Review
- 3 Board. Is there anybody on the teleconference currently?
- MR. GLEN GROSKOPH: Yeah, Glen Groskoph,
- 5 I'm still on.
- 6 MS. ANNE WILSON: And Anne Wilson.
- 7 THE FACILITATOR: Thank you.
- MS. AILEEN STEVENS: Ms. Aileen Stevens,
- 9 ENR. We can just request it as an undertaking if -- I
- 10 don't want to hold up the process too much here.
- 11 THE FACILITATOR: Or perhaps in the
- 12 interim you can ask one of your additional questions
- 13 while we wait for -- or do they all need the consultant?
- 14 MS. AILEEN STEVENS: Aileen Stevens, ENR.
- 15 Yeah, they do kinda tie together. It's -- it's just with
- 16 respect to us seeing the isoplus and the maximum expected
- 17 concentrations and then that would, of course, affect the
- 18 monitoring expectations.
- 19 The monitoring plan, however, was promised
- 20 at a later date. It's just that there was examples
- 21 suggested, such as five (5) dust fall locations
- MR. CHRIS MADLAND: Hello.
- THE FACILITATOR: Hello. Chuck Hubert,
- 24 Review Board. Please state your name and affiliation.
- 25 MR. CHRIS MADLAND: It's Chris Madland,

- 1 Golder Associates in Calgary.
- THE FACILITATOR: Thank you very much for
- 3 taking the time to join us. There's a question for you
- 4 from the floor.
- 5 MS. AILEEN STEVENS: Aileen Stevens, ENR.
- 6 Hi Chris.
- 7 MR. CHRIS MADLAND: Hi, how are you?
- MS. AILEEN STEVENS: Good. Yourself?
- 9 MR. CHRIS MADLAND: Good, thanks.
- 10 MS. AILEEN STEVENS: Good. We're just
- 11 talking about the dispersion and deposition modelling
- 12 that you conducted. Thanks very much for providing those
- 13 isoplus. It was just that the output only represented
- 14 areas of expected exceedences of criteria and we'd like
- 15 to be able to see areas of -- or of the highest expected
- 16 concentrations, not just those where there will be
- 17 exceedences. So that will help with establishing a
- 18 monitoring plan.
- 19 MR. CHRIS MADLAND: Right. Okay, we can
- 20 endeavour to provide that certainly.
- MS. AILEEN STEVENS: All right, then.
- 22 Thanks.

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--- UNDERTAKING NO. 26: For Canadian Zinc when
                                 modelling air quality, the
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                                 output only represented areas
                                 of expected exceedences of
 5
                                 criteria and ENR would like
                                 to be able to see areas of
 6
                                 the highest expected
                                 concentrations, not just
 9
                                 those where there will be
10
                                 exceedences to assist with
11
                                 establishing a monitoring
12
                                 plan.
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                    THE FACILITATOR: Chuck Hubert, Review
1 4
15
     Board. Do you have any follow-up questions with respect
    to air quality?
16
                    MS. AILEEN STEVENS: Aileen Stevens, ENR.
17
18
     Thanks very much. No.
19
                    THE FACILITATOR: Thank you. Are there
     any additional questions from either people here in the
2 0
     room or on the teleconference with questions? Mr.
2 1
     Redvers...?
22
2.3
                    MR. PETER REDVERS: Peter Redvers, Naha
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    Dehe Dene Band. With respect to the air quality, the
    consultant's report that was submitted as a part of one
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1 of the IR responses indicated that -- that there was a --
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- 2 because this was the consultant writing it, not Canadian
- 3 Zinc, it was a consultant's report that there was the
- 4 likelihood that the air monitoring system that was being
- 5 proposed and the number of monitoring sites would be
- 6 adopted. But we were just wanting to have a -- a clear
- 7 commitment from Canadian Zinc that they would, in fact,
- 8 be following the consultant's report and implementing the
- 9 monitoring program that was put in place.
- 10 The issue with this is, just out of
- 11 concern or wanting some assurance that in terms of worker
- 12 health and safety, that it would seem to be some
- 13 exceedences of some of the metal concentrates,
- 14 particularly on site and in particular certain areas on
- 15 site, and we'd like to have some assurance that workers
- 16 are going in -- that are going into that mine site are
- 17 adequately protected both from a monitoring system and
- 18 any other kind of measures that are required to -- to
- 19 protect both short- and long-term health of workers.
- 20 MR. ALAN TAYLOR: It's Allan Taylor here.
- 21 MR. CHRIS MADLAND: Did you want to
- 22 address that, or...?
- MR. ALAN TAYLOR: Yeah, I'll take it,
- 24 Chris. It's Alan Taylor here. Workers' health and safety
- 25 is the prime concern, and we always commit to our safe

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1 practices on that. Not a problem.
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- 2 MR. PETER REDVERS: Peter Redvers. Was
- 3 that a commitment, then, that you would be fulfilling the
- 4 recommendations or suggestions from the consultant in
- 5 terms of the air monitoring system that would be in --
- 6 put into place?
- 7 MR. CHRIS MADLAND: I'm sorry. If that -
- 8 if that was a question for Chris -- Chris Madland, I'm
- 9 -- I'm having some trouble hearing -- hearing the
- 10 conversation there or the question.
- 11 MR. PETER REDVERS: Peter Redvers. I was
- 12 just noting again that in the consultant's report, there
- 13 was a suggestion for a particular air quality monitoring
- 14 system to be put -- put into place around the mine site,
- 15 and I was just asking for whether Canadian Zinc was going
- 16 to be -- make a commitment to, in fact, implement that as
- 17 -- as outlined in that report.
- 18 MR. CHRIS MADLAND: Right. So I'll --
- 19 I'll leave Canadian Zinc to answer that question, then.
- 20 MR. ALAN TAYLOR: It's Alan Taylor here.
- 21 Yes, we are committed.
- 22
- 23 --- UNDERTAKING NO. 27: Canadian Zinc commits to
- 24 implement the air monitoring
- 25 system as outlined in the

1 report.

2

- 3 THE FACILITATOR: Thank you very much.
- 4 Additional questions on the subject of air quality,
- 5 please.
- 6 Thank you very much. In that case, we
- 7 will move on to the subject of the -- well, there's been
- 8 some debate about what to call it, and I'm not sure what
- 9 to call it, so I'm not -- won't call it anything, but
- 10 I'll let -- the next agenda item, as you can see, on the
- 11 -- refers to a committee of some type that is ongoing and
- 12 may be altered in some fashion, and I'd be interested in
- 13 hearing parties speak to that, please. Peter...?
- 14 MR. PETER REDVERS: Peter Redvers of the
- 15 Naha Dehe Dene Band. With -- when the traditional
- 16 knowledge assessment was carried out, there was certainly
- an interest on the part of the community to be involved
- in -- on -- first of all, to ensure that a wide range, an
- 19 adequate range of monitoring was going on within the
- 20 traditional land use area, and that the community would
- 21 have an active role in that.
- 22 And there were a couple of options, I
- 23 guess, put forward and discussed earlier this spring.
- 24 One (1) was for, as I mentioned, the -- the band to have
- 25 -- or be resourced, possibly through Canadian Zinc and/or

- 1 the GN --INAC, to be able to carry out some independent
- 2 monitoring, particularly independent environmental
- 3 monitoring, and that was -- so that was one of the
- 4 options.
- 5 The second one, as I mentioned earlier,
- 6 which was the preferred one, was to have the Naha Dehe
- 7 Dene Band involved in some degree to some kind of
- 8 oversight committee. It may or may not be directly
- 9 involved in monitoring, but it would at least play a role
- 10 in looking at and assessing the type of monitoring that's
- 11 going on and being able to provide some advice and
- 12 guidance in terms of the adaptive management strategies
- 13 that might be utilized.
- 14 In the DAR and correct me if I'm wrong,
- 15 David the Canadian Zinc had suggested, as a part of
- 16 that -- in fact, Canadian Zinc had brought this forward --
- this option forward, that the technical committee that
- 18 was currently in place that was struck as a part of sort
- of the transition, I guess, to the expanded Park boundary
- 20 scenario continue but be sort of adapted or adjusted such
- 21 that it would be able to fulfil that role.
- 22 And that adjustment might include --
- 23 certainly would include the addition of the Naha Dehe
- 24 Dene Band, but also perhaps some other agencies involved
- 25 in regulatory and compliance matters.

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\ensuremath{\mathtt{I}} So that option was put forward, and \ensuremath{\mathtt{I}}
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- 2 think on August -- Parks was certainly one of the key
- 3 players. Dehcho First Nations is another party to the
- 4 technical committee. Parks Canada did respond and
- 5 indicated that there would be an interest in having that
- 6 type of a committee, or whatever it be called, struck,
- 7 but that they didn't feel that the technical committee --
- 8 they didn't feel that the technical committee was the --
- 9 necessarily the vehicle to do that, and there might need
- 10 to be a new group struck with some terms of reference.
- 11 We haven't -- there haven't -- hasn't been
- 12 an opportunity to really sit down and -- and work this
- 13 out, and we haven't -- at this point, there isn't a plan,
- 14 as such, to do so, but what we would like to get at this
- 15 -- out of this hearing is a commitment from parties and
- 16 if -- some preliminary discussion, if needed, certainly a
- 17 commitment from Canadian Zinc and a commitment from Parks
- 18 Canada, and a commitment or declaration of interest of
- 19 any other agencies at the table as to the steps that
- 20 might be taken to get this group or this committee up and
- 21 running and to begin to flesh out some of the roles and
- 22 responsibilities.
- 23 When we look at, you know, just as a -- a
- 24 bit of an example, the types of -- some of the monitoring
- 25 activities and oversight activities that we've been

1 discussing over this last couple of days obviously relate

- 2 to water quality, the discharge, and that's both
- 3 discharge in terms of the -- the process out of the
- 4 treatment plant, as well as some of the site drainage
- 5 issues.
- 6 There's discussion today about the kind of
- 7 monitoring and perhaps adaptive management that might be
- 8 required with respect to the paste backfill operations,
- 9 air quality monitoring obviously. There's going to be
- 10 some adaptive management requirements potentially,
- 11 development and implementation of a wildlife management
- 12 plan. Again, it's going to have adaptive management
- 13 features within that.
- 14 There will be a need for monitoring of the
- 15 road operations, and that would -- certainly a primary or
- 16 key one from the community's perspective is spill
- 17 prevention, and then just general safety and obviously
- 18 the issue of access, and that depends on the kind of
- 19 access controls that might be put into place.
- There will be development and
- 21 implementation of an Aquatic Effects Monitoring Program.
- 22 There is -- once the archaeological impact
- 23 assessment it does -- is done, there will be need for,
- 24 and I think there's a commitment to, develop heritage
- 25 resource management protocol, and that would encompass

1 both parks as well as the areas outside of the Park, and

- 2 then obviously there will be a post-closure monitoring
- 3 down the road at some point.
- 4 So these kinds of -- this kind of
- 5 monitoring is really critical for when you -- when you
- 6 look at protection of the traditional land use area, the
- 7 traditional environment, and so engagement in that is a -
- 8 is a really critical aspect of this project for the
- 9 Naha Dehe Dene Band.
- 10 So, I guess what I'd like to -- and the
- 11 question is -- and it would be directed to Canadian Zinc
- 12 and it would be directed to Parks Canada and the other
- 13 agencies at the table -- is: What steps could be taken
- 14 to move forward on beginning to flesh this out and
- 15 provide some more detail to it and begin to create some
- 16 structure that would allow for Nahanni engagement in the
- 17 range of monitoring activities that are required?
- And again, this may not be a body that
- 19 does monitoring or -- but one that just has some
- 20 oversight in terms of what is going on and the results of
- 21 it and how that may feed into adaptive management
- 22 strategies.
- THE FACILITATOR: Thank you for that
- 24 question. Would the developer like to respond, please?
- 25 MR. DAVE HARPLEY: Dave Harpley. We see

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1 a role for a -- a body that is both focussed towards
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- 2 management and review of technical information, and also
- 3 a vehicle for public engagement and interaction,
- 4 including community engagement. And whether we consider
- 5 that to be an evolution of the existing CZN Parks Data
- 6 Technical Committee or just a -- a -- a new body, I'm not
- 7 sure if it's different or the same, but what we have in
- 8 mind is that the body we're talking about -- let's call
- 9 it the technical advisory committee, just for simplicity
- 10 -- what we have in mind is that one (1) or more parties
- 11 might be tasked with managing the administration of such
- 12 a committee. That can be co-managed perhaps between CZN
- 13 and Parks, or, if Parks are not happy to do that, then
- 14 CZN could take it on by themselves.
- 15 But the intent is really to meet
- 16 frequently and consider information and consider the
- 17 necessity for adaptive management and whatever else is
- 18 required for the -- the operation, and also an
- 19 opportunity for parties, agencies or public to raise
- 20 concerns or questions and have them dealt with in a
- 21 multi-party manner so that they feel comfortable that
- 22 they're given fair and due consideration and not a bias
- 23 from -- from one (1) party only.
- 24 What I have in mind is that this committee
- 25 would meet three (3) times a year. The -- there would be

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1 a winter meeting, perhaps in Nahanni, so that there would
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- 2 be a community meeting in -- in that particular location,
- 3 and also at a time of year when the ice bridges are in
- 4 operation so access is easy. And also at that time of
- 5 year, road operations may be in progress, so there's an
- 6 opportunity to review those operations.
- 7 Then a spring meeting in Fort Simpson, and
- 8 that would be the main meeting of the year; if we were
- 9 going to consider annual information, perhaps that would
- 10 be the appropriate time to do that, and that location's
- 11 been selected because it's the location in the region
- 12 that's most easy for everyone to get to in terms of
- 13 people coming perhaps from other locations.
- 14 I'm suggesting that that meeting might be
- 15 attended by agencies that wouldn't normally participate,
- 16 that might just come once a year, and that would be their
- 17 -- the appropriate time to attend.
- And then the third meeting perhaps would
- 19 be at the mine site in late summer, which gives everyone
- 20 the opportunity to see operations actually in progress at
- 21 the mine, and it can include a mine tour.
- 22 So that way, we're -- we're covering the
- 23 two (2) main impacted parties, and also the mine site.
- 24 So that's kind of the generality of what I
- 25 have in mind at this point. I haven't really given a lot

- of thought beyond that to specific details but,
- 2 certainly, we can discuss that moving forward.
- THE FACILITATOR: Thank you. Would Parks
- 4 Canada like to respond to that?
- 5 MR. MIKE SUITOR: Mike Suitor, Parks
- 6 Canada. As I've stated before, and officially on the
- 7 record for this file, Parks Canada is very interested in
- 8 ensuring something similar to the technical advisory
- 9 committee, or whatever name might be struck for it, is
- 10 put in place.
- 11 As I've suggested before as well, we -- we
- 12 would prefer that a new terms of reference be drawn up
- 13 rather than evolving from the existing one, to ensure
- 14 that the purpose is clear and the application of the
- 15 group is clear as well.
- I think some of the issues that Peter
- 17 listed off there provide an excellent example of what the
- 18 terms of reference might incorporate, or at least the
- 19 scope of the term of reference.
- I think some of the components that Mr.
- 21 Harpley brought up as well also provide an example of --
- 22 of what the terms of reference might include.
- 23 And -- and I would suggest that perhaps
- 24 the next step might for Canada (sic) Zinc to draw up that
- 25 terms of reference, incorporating some of those

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1 components, as well as suggest the parties to that
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- 2 committee and possible involvements, and send that out
- 3 for review, if that's amenable.
- 4 MR. DAVID HARPLEY: David Harpley. Yes,
- 5 we can do that. Just to expand on my kind of impression
- 6 of the committee and what it would do and how it would
- 7 function, a bit of background to it is, I think we all
- 8 probably recognize that there are a number of different
- 9 interests in the region, and the mine is just one of
- 10 those interests. We have to recognize that, as far as
- 11 jurisdiction goes, the area of the mine site and half of
- 12 the winter road still resides within the NWT, and so GNWT
- 13 still retain a role, particularly for wildlife.
- 14 Of course, we're surrounded by the Park at
- 15 the mine, and the road actually crosses the Park, so
- 16 clearly Parks are also involved.
- So I really see this as a multi-party,
- 18 multi-stakeholder type situation where we need to
- 19 consider co-management and cooperation and collaboration
- 20 on surveys and oversight and monitoring and such. So
- 21 that's kind of why I see it just make sense to have us
- 22 all at the same table.
- 2 3
- 24 --- UNDERTAKING NO. 28: For Canadian Zinc to draw up
- the terms of reference,

1	incorporating some of those
2	components, as well as
3	suggest the parties to that
4	committee and possible
5	involvements, and send that
6	out for review re formulation
7	of a technical advisory
8	committee
9	
10	MR. MIKE SUITOR: Mike Suitor, Parks
11	Canada.
12	I certainly agree with those comments, Mr. Harpley, and I
1 3	would certainly hope that GNWT and possibly INAC would be
1 4	very involved in this.
1 5	As you mentioned, half the road and and
16	the mine site itself are actually in their jurisdiction,
1 7	not Parks Canada, although we of course have a large
18	section of the road within parks, and the mine itself
1 9	the mine and its development will certainly be affecting
2 0	Nahanni National Park, so we do have a vested interest,
2 1	and, as I've indicated, would be very much interested in
2 2	being involved in this committee.
2 3	The one last comment that I'd like to make
2 4	about it is is that, as we move forward on this, I
2 5	would Parks Canada would certainly wish to ensure that

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1 any committee that was struck would be effective to its
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- 2 fullest ability, and -- and not just a -- simply a
- 3 review, but to help in decision making, of course,
- 4 respecting each organization's mandates and requirements
- 5 as they may be.
- MR. PETER REDVERS: Peter Redvers, Naha
- 7 Dehe Dene Band.
- 8 There were, I know, in the discussions
- 9 we've had in community and with the Chief Fred Tesou on
- 10 this matter, there is a concern that it doesn't get too
- 11 large or too unwieldy as well, so that the voice of the
- 12 community gets a little bit muted or overwhelmed.
- 13 So some consideration, and I -- I believe
- 14 you have given that consideration, David, to somewhat of
- 15 a core group that -- with -- with the understanding, as
- 16 you mentioned, with the spring meeting, that other
- 17 parties that have a -- have a role to play, but maybe not
- 18 an ongoing role, could be brought in and have an
- 19 opportunity.
- 20 So I guess the question I would have, if
- 21 there were some other agencies present, or certainly
- 22 other governments, including the -- the Dehcho First
- 23 Nation regional government, if -- if any of them would
- 24 like to comment on this -- what's being discussed and
- 25 what their role might be in it, or what their interest

- 1 might be in it.
- 2 MR. JONAS ANTOINE: Thank you. Jonas
- 3 Antoine, Dehcho First Nations.
- I think the implications are deeper than
- 5 what I hear, because it goes back many years ago to 2001
- 6 when Dehcho First Nations signed an interim measures
- 7 agreement with Canada. And in that interim measures
- 8 agreement, one (1) of the things -- one (1) of the
- 9 directions out of that was to start working with Parks
- 10 Canada to -- to -- to manage the Nahanni Park. And
- 11 through this setup Parks Canada signed an MOU with
- 12 Canadian Zinc to recognize one another.
- 13 Canadian Zinc says, Yeah, we're in a park,
- 14 and Parks Canada said, Yes, we have a mine in the middle
- 15 of the Park that understanding. And this is where the
- 16 technical committee was struck, because when Parks Canada
- 17 signed the MOU with Canadian Zinc because Dehcho First
- 18 Nations was partners with Parks Canada, we automatically
- 19 became a part of this MOU.
- 20 So it -- the implications are a little
- 21 deeper than that, you know, so I think we have to take --
- 22 do the right steps to -- if -- if we want to set up a new
- $^{23}$  -- or -- or restructure the committee, we have to
- 24 backtrack a little bit and do the right moves.
- 25 And I think Mike from Parks Canada, do --

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do you have any -- anything else to add to that, or...?
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- 2 MR. MIKE SUITOR: Mike Suitor, Parks
- 3 Canada. Thank you, Jonas. No, I don't think I do. I
- 4 think you did encapsulate that very well.
- 5 The way that we see the MOU that was
- 6 initially signed was for the establishment of the -- the
- 7 Park, as well as recog -- like you said correctly,
- 8 understanding -- recognizing both the establishment of
- 9 the Park expansion, as well as Canada (sic) Zinc's right
- 10 on that land and -- or -- or for -- I should say, for
- 11 interest to -- to work on that land, having an access
- 12 road through the Park.
- 13 And, as you rightfully point out, Dehcho
- 14 First Nations was -- was incorporated within the
- 15 technical committee for that purpose.
- 16 I -- I don't foresee any -- I think we --
- 17 like you said, we might need to look into what might be
- 18 required to make this more formal and official. I
- 19 believe that's what I heard, and I -- I certainly think
- 20 that that's something Parks Canada would be interested in
- 21 doing with all parties that would be interested: Nahanni
- 22 Butte, Dehcho First Nations, and Canada (sic) Zinc of
- 23 course being some of those members potentially.
- MR. DAVE HARPLEY: Dave Harpley. I just
- 25 want to add a few more comments to be clear on -- on how

- 1 we actually see this committee.
- 2 We certainly don't see it as being ex --
- 3 an -- a mechanism to exclude anybody from participating.
- 4 We see this as a -- being an entity that would promote
- 5 interaction and encourage participation.
- 6 We would expect that Nahanni Butte and
- 7 Fort Simpson that is, the bands in those locations -
- 8 would nominate members to sit on the committee, just so
- 9 that we could ensure that is at least a representative to
- 10 report back to the communities.
- 11 If DCFN wanted to have a seat at the
- 12 committee as well, that would be quite acceptable, but
- 13 obviously we would like to retain a core group, and
- 14 perhaps for two (2) of those three (3) meetings I
- 15 mentioned, it would -- it would be primarily the core
- 16 group.
- But, just to be clear, it would still need
- 18 to be a public committee, and we would not seek to deter
- 19 people from attending if they wished to. It would be
- 20 open to community members, agencies if they felt they
- 21 needed to attend, and even others in the region,
- 22 particularly the Dehcho region.
- 23 MS. KRYSTAL THOMPSON: Hi. Krystal
- 24 Thompson with INAC. Just from INAC's perspective, at
- 25 this point, we're interested in participating in the

discussions surrounding the development of some type of

- 2 collaborative body, and, so, yeah, I just wanted to put
- 3 that on the record.
- 4 THE FACILITATOR: Thanks very much. Any
- 5 other parties like to speak to the formation of this
- 6 committee, formerly known as the technical advisory
- 7 committee.
- 8 MS. AMY JENKINS: Hi. This is Amy
- 9 Jenkins with --
- 10 MS. ANNE WILSON: Anne Wilson with
- 11 Environment Canada.
- 12 I think that some of our wildlife concerns
- 13 with the monitoring weren't explicitly addressed
- 14 yesterday and are still outstanding to some degree. So
- 15 that may be a home for them to have a Canadian Wildlife
- 16 Service rep. on that committee. We could participate in
- 17 that respect.
- 18 We will also continue to participate for
- 19 air quality and -- and spill contingency and water and
- 20 other aspects through the regulatory process, and would
- 21 be happy to provide appropriate people to sit on a
- 22 committee if those topics were going to be discussed.
- THE FACILITATOR: Thank you very much.
- 24 Further comment on the floor?
- 25 MS. AMY JENKINS: This -- this is Amy

- 1 Jenkins with ENR.
- 2 Since GNWT was mentioned, I'm sure that --
- 3 I know that Gavin, my supervisor, is -- has lots to say
- 4 about monitoring agencies and monitoring programs. So
- 5 I'm sure if we were to be involved in the terms of --
- 6 developing the terms of reference, or helping with that
- 7 or participating in this community -- or this committee,
- 8 that that would -- that would be something that we're
- 9 interested in.
- 10 THE FACILITATOR: Did I see a hand in the
- 11 -- no? All right. Sorry. It was a phantom hand.
- 12 Any further comments on this technical
- 13 committee form -- Mr. Redvers, please.
- MR. PETER REDVERS: Peter Redvers, Naha
- 15 Dehe Dene Band.
- 16 I guess, for clarification, Canadian Zinc
- 17 has indicated it would take a first stab at putting
- 18 something together, a little more flesh or structure into
- 19 it, that it would be circulated to interested parties.
- 20 And then I'm wondering if perhaps we can
- 21 have a -- sort of a multi-party commitment of perhaps
- 22 sometime in -- over the winter, I would -- I mean,
- 23 there's lots of -- I'll target that anyway, maybe early
- 24 winter or mid-winter, having some kind of a get-together
- 25 initially to sort of look at that and -- and have a head-

- 1 to-head kind of discussion with interested parties, and
- 2 might suggest that that be held in Fort Simpson to keep
- 3 it in the Dehcho.
- 4 MR. DAVE HARPLEY: Dave Harpley. I'm not
- 5 sure if we're talking about late fall or early winter,
- 6 depending on what the weather is, but not too far down
- 7 the road here. And we will commit to preparing a draft.
- 8 I'm not sure we will commit to all attending in Fort
- 9 Simpson, but we could certainly participate in a
- 10 conference call.
- 11 THE FACILITATOR: Thank you for that
- 12 commitment, Canadian Zinc.
- 13 Further comments on this topic?
- 14 Well, thank you very all -- all very much.
- 15 Those are good discussions there. That -- I think that
- was beneficial and useful for everybody.
- Now we're at an additional agenda item
- 18 that I'd mentioned earlier after lunch, and this is --
- 19 will be a brief closing statement by -- oh, sure, we can
- 20 have a coffee break first.
- 21 There's been a request for a coffee break
- 22 prior to anything else, and we'll take ten (10) minutes
- 23 for that. See you in ten (10) minutes.

2 4

25 --- Upon recessing

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    --- Upon resuming
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 3
                    THE FACILITATOR: ...thanks.
                    MR. PETER REDVERS: Peter Redvers, Naha
 5
     Dehe Dene Band.
                    Just for clarification that this would be
 6
     a project-specific advisory committee, and certainly not
 7
 8
     taking on or assuming any of the roles or functions of
 9
     the current -- I think the wording is technical committee
     or consensus group or any of those things.
10
11
                    So perhaps when you're drafting, it might
12
     be wise to refer to it as the Prairie Creek Mine
13
     Technical Advisory Committee, so that's built right into
1 4
     the -- the title, that it is clearly a project-specific
15
     group with a mandate to provide some ability to have
     oversight over the range of monitoring and other
16
     activities associated with operations.
17
                    THE FACILITATOR: Thank you. At this
18
     point, I'd like to allow Parks Canada to have a brief
19
2 0
     closing statement, following which the developer will
     have the opportunity to respond. Thanks.
21
22
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2.3 CLOSING STATEMENT BY PARKS CANADA:

24 MR. MIKE SUITOR: Thank you. Mike

25 Suitor, Parks Canada.

- 2 little blurb I've written up here on a summation of -- of
- 3 what we've seen here, and -- and ways that we see moving
- 4 forward, some points that need to be brought forward.
- 5 Parks Canada is glad to see that Canada
- 6 (sic) Zinc made several commitments during the technical
- 7 sessions here, and, as I understand, MVEIRB will be
- 8 providing those commitments to the rest of the group. We
- 9 -- we look forward to receiving all of the information
- 10 from the -- the different commitments that were made.
- 11 One (1) point that I would like to make is
- 12 in some cases, I believe that we still need a bit of a
- 13 clarification on dates. So, as we start to pull out
- 14 those commitments, we might need to firm up dates if they
- 15 were left a little loose in the air.
- 1'd like to remind both the Board and
- 17 Canada Zinc that Parks Canada expects that any responses
- 18 that are made to those commitments are done so in a
- 19 complete and rigorous manner to ensure that it allows us
- 20 to fully review all of the information, in combination
- 21 with existing information, to come up with an assessment,
- 22 rather than placing the importance only on speed in this
- 23 process. We need to ensure that we can make the
- 24 appropriate determinations.
- 25 We note that there has been an extremely

- 1 large amount of -- of Information Requests placed on
- 2 Canada (sic) Zinc during this, and we acknowledge that
- 3 it's -- it's going to be quite a task for them to be able
- 4 to provide that information within the one (1) week that
- 5 we heard mentioned several times in the last couple of
- 6 days.
- 7 And we also note again that a lot of this
- 8 information is required for us, again, to prepare our
- 9 technical reports.
- 10 And then also I want to emphasize, again,
- 11 that we need this in a very clear and robust manner to
- 12 ensure that we reduce any potential delays that might
- 13 come down the road due to, again, further inadequacies in
- 14 the information.
- 15 And I might add to that that, during this
- 16 process, I -- I would expect that it wouldn't be
- 17 unforeseeable if Canada (sic) Zinc required clarification
- 18 from any of the parties, and I would encourage, if that
- 19 was the case, that Canada (sic) Zinc directly contact us
- 20 and we can have those conversations to ensure again that
- 21 the information we receive is -- is what we're looking
- 22 for to help expedite this process and to ensure that all
- 23 parties are satisfied at the end of the day.
- 24 I'd like to point out that the technical
- 25 sessions, as a -- as a whole, have been useful, but have

1 also not allowed us to fully address all of the questions

- 2 and the development in its fullest and, therefore,
- 3 there's still some holes that we have in terms of
- 4 potential significant effects for some of our value
- 5 components. And this is, unfortunately, just the nature
- 6 of having a lot of information to review in -- in several
- 7 days.
- 8 Given -- given the importance of several
- 9 of the Information Requests committee to by Canada (sic)
- 10 Zinc, we also think that it's not -- it is likely that
- 11 additional clarification and/or information might be
- 12 required to determine the significance on several valued
- 13 components.
- 14 I would suggest this information will be
- 15 incorporated, with many of the components of existing
- 16 information, for determination for significance.
- 17 I'd also like to remind the Board that
- 18 Parks Canada at this time still has an outstanding
- 19 request with regard to several obligations that are --
- 20 are a legal requirement of both Parks Canada and the
- 21 Board, and this -- this issue will need to be resolved at
- 22 sometime very -- in the very near future. And just to
- 23 point that out to all the parties. And we will require
- 24 that information prior to technical submission.
- 25 Finally, I'd just like to ask Mr. Hubert

1 right now, when you have an idea of when transcripts from

- 2 this process might be available, and when those
- 3 commitments might also be available to all parties.
- THE FACILITATOR: Chuck Hubert with the
- 5 Review Board. The transcripts, with commitments attached
- 6 to those transcripts, will be available Wednesday or
- 7 Thursday of next week. Is that -- does that conclude
- 8 Parks Canada's remarks?
- 9 MR. MIKE SUITOR: Yes, thank you.
- 10 THE FACILITATOR: Thank you.
- 11 Comments from the developer, please.

12

- 13 CLOSING COMMENTS BY CANADIAN ZINC:
- 14 MR. DAVE HARPLEY: Dave Harpley. Given
- 15 the number and content of the commitments we have made
- 16 through the course of the previous two (2) days and
- 17 today, I think it's safe to say that we will not complete
- 18 them all in one week.
- 19 Further to that, we've already asked the
- 20 Review Board for approximately that length of time to
- 21 consider what we've learned over these three (3) days,
- 22 and to get back to them in terms of what we think is an
- 23 appropriate timeframe for a proper response.
- 24 So, I don't want to go into too much more
- 25 detail at this point until we've actually thought about

- 1 it some more, but we're not going to get to all of this
- 2 in -- in a matter of a week or so. I don't want to come
- 3 back with a rushed, half-baked reply. It would be a
- 4 complete, thorough response.
- 5 In addition to that, I recognize that
- 6 there are benefits and limitations to this sort of
- 7 process, and no matter what we achieved in this session,
- 8 I had already concluded that we would be contacting and
- 9 meeting with individual groups subsequently, in any
- 10 event, to -- as a followup to see what issues remained
- 11 and how they could be addressed. That's probably
- 12 something that's even more important now, given what's
- 13 transpired.
- 14 So I fully expect that to happen, and I
- 15 don't believe too much time will elapse before that takes
- 16 place.
- 17 THE FACILITATOR: Thank you very much.
- 18 The Board encourages those meetings between the developer
- 19 and various parties to deal with specific focus topics
- 20 and present the results of those discussions to the
- 21 Board, and we'll post those for the benefit of all
- 22 parties.
- 23 Any further comments from anybody at this
- 24 stage?
- 25 MS. ANNE WILSON: It's Anne Wilson. Were

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1 you looking for closing comments, Chuck?
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- THE FACILITATOR: Sure, please. If you
- 3 have any, please go ahead.

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- 5 CLOSING COMMENTS BY ENVIRONMENT CANADA:
- MS. ANNE WILSON: Yeah. It's Anne
- 7 Wilson. I just thought it would be helpful to reiterate
- 8 our expectations for information coming in, the things
- 9 that we've asked for specifically.
- 10 These would include a characterization of
- 11 the sewage effluent for both quality and quantity so that
- 12 nutrient loading can be assessed better.
- 13 I understand the company's going to try
- 14 and do some testing of existing samples for the major
- 15 ions so that we can get a better sense of the TDS
- 16 composition potentially for the effluent.
- 17 Then we'd also ask for estimates of
- integrated effluent quality, and that would be for all
- 19 sources combined, that is, the process water, the mine
- 20 water site runoff and sewage effluent and for a four (4)
- 21 parameter list, i.e., metals, nutrients and major ions.
- 22 We support the request that others have
- 23 made for more comprehensive parameter lists for
- 24 estimating downstream concentrations, then looking at the
- 25 silt contingency section. We'll be looking forward to

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1 seeing a linear risk assessment, and we were also
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- 2 promised clarification on the acid spill response
- 3 section.
- 4 With respect to the AEMP, there's nothing
- 5 further expected, but clarification was provided that the
- 6 AEMP is going to be a proactive monitoring program rather
- 7 than one that's triggered by exceedences in the SNP.
- 8 We'd be happy to review and discuss any
- 9 future iterations of the AEMP, and, just to reiterate,
- 10 we'd also be pleased to participate, as appropriate, on
- 11 any advisory committee. That's it.
- 12 THE FACILITATOR: Thanks very much. I'll
- 13 ask once again if anybody else would like a further
- 14 statement, either here in the room or on the
- 15 teleconference. Mr. Redvers, sure.

16

- 17 CLOSING COMMENTS BY NANA DEHE DENE BAND:
- 18 MR. PETER REDVERS: Peter Redvers, Naha
- 19 Dehe Dene Band. Just perhaps to inform all parties that,
- 20 in terms of the approach that has been taken with respect
- 21 to this EA, the band has been focussed on two (2) paths:
- 22 one (1) is the negotiation of an IBA agreement; the other
- 23 is clarification on how some of its concerns are being
- 24 addressed in -- through the -- through the EA process.
- 25 And the primary one, and certainly

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1 significant one at this point, is the issue of water
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- 2 quality downstream, the discharge, the whole concept of
- 3 an approach to discharge, and how that is going to impact
- 4 on the creek and the water system.
- 5 The hope is that there can be significant
- 6 clarity on the water quality issue and the discharge
- 7 issue in terms of not only description of what's going to
- 8 be happening, but an assessment of the potential impacts
- 9 for that prior to the community hearing, so that when we
- 10 go into the community hearing, the community is aware of
- 11 any outstanding kind of risks or tradeoffs, I guess, for
- 12 lack of a better word. We'll use the word "impact."
- 13 Clarity on understanding of the kind of impacts that
- 14 would occur from operations, and particularly the
- 15 methodology that Canadian Zinc is proposing in terms of
- 16 dealing with water discharge.
- 17 We're pretty certain the IBA will be
- 18 addressed at that point, so that's the missing element.
- 19 So -- so again, all parties, as this moves forward, it is
- 20 certainly going to be helpful to have very, very clear
- 21 understanding of potential impacts, significant of
- 22 impacts, relation to water quality, prior to the
- 23 community hearing; that would be very, very helpful from
- 24 a community perspective.
- 25 THE FACILITATOR: Thanks very much.

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Anything further from the developer?
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                   With that, I'd like to close our technical
     meeting for the Prairie Creek Mine. I'd like to thank
 3
     everybody for attending. Your attendance is what made
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 5
     this worthwhile. I very much appreciate the time and
 6
     effort parties took, and I appreciate the time and effort
     the developer took to make this a reality and to make
     this successful.
 8
 9
                    Thanks again for taking part, and hope to
10
     see you again sometime. Bye for now.
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     --- Upon adjourning
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    Certified Correct,
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     Wendy Warnock, Ms.
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