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MACKENZIE VALLEY ENVIRONMENTAL
IMPACT AND REVIEW BOARD

GIANT MINE REMEDIATION PROJECT
ENVIRONMENTAL ASSESSMENT 0809-001

TECHNICAL SESSION

The Facilitators: Alan Ehrlich
 Paul Mercredi
 Darha Phillpot

HELD AT:

Yellowknife, NT
October 19, 2011
Day 3 of 5

	APPEARANCES	
1		
2	Alan Ehrlich	) MVEIRB staff
3	Paul Mercredi)
4	Jessica Simpson (np))
5	Darha Phillpot)
6	Doug Ramsey	) Tetrattec
7	Dave Tyson) Tetrattec
8	Cesar Oboni)
9	Lukas Arenson) BGC
10	Jack Seto (np)) BGC
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12	Joanna Ankersmit) AANDC
13	Lisa Dyer) PWGSC
14	Adrian Paradis) AANDC
15	Dr. Ray Case) GNWT
16	Mark Cronk	) PWGSC
17	Daryl Hockley	) SRK
18	Darren Kennard (np)	) Golder
19	David Knapik (np)	) AECOM
20	Yose Cormier	) AANDC
21	Henry Westermann	) PWGSC
22	Katherine Silcock	) AANDC
23	Erika Nyssonen	) GNWT
24	Dave Abernethy	) PWGSC
25	Bruce Halbert	) SENES

1 LIST OF APPEARANCES (Cont'd)

2	Rudy Schmidtke	)	AECOM
3	John Hull	)	Golder
4	Octavio Melo	)	AANDC
5	Michael Nahir	)	AANDC
6	Dan Hewitt (np)	)	SRK
7	Doug Townson (np)	)	PWGSC
8	Robert Boon	)	AECOM
9	Kyla Kirk	)	AECOM
10	Hilary Machtans	)	Golder
11	Nathan Schmidt	)	Golder
12	Till Freihammer	)	AECOM
13	Gord Woollett	)	AECOM
14	Arthur Cole	)	Golder
15	Greg Newman (np)	)	NGI/SRK
16	Tony Brown	)	SENES
17	Mark Palmer	)	PWGSC
18	John Hill	)	Golder
19			
20	Jeff Humble	)	City of Yellowknife
21	Dennis Kefalas)	
22			
23	Morag McPherson	)	DFO
24	Rick Walbourne)	
25	Sarah Olivier)	

1 LIST OF APPEARANCES (cont'd)

2 Amy Sparks) Environment Canada

3 Lisa Lowman)

4

5 France Benoit) Alternatives North

6 Kevin O'Reilly)

7 Ed Hoeve (np)) EBA Engineering

8 Bill Horne (np)) EBA Engineering

9

10 Todd Slack) YKDFN

11 Randy Freeman (np))

12 Lukas Novy) ARKTIS

13

14 Ricki Hurst) DPRA Canada

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4		to the group on how we see the Baker
5		Creek north diversion being deployed
6		as a contingency. Provide the current
7		thinking and outline an approach to
8		the current thinking that the project
9		requires quick summary of the process
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12		would we go about following the
13		directive from the inspector for this
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1 --- Upon commencing at 9:08 a.m.

2

3 THE FACILITATOR EHRLICH: Okay. Good
4 morning, everybody. And welcome to day 3 of the Giant
5 Mine technical sessions. I am going to keep the opening
6 comments fairly brief, if I can.

7 You'll recall yesterday we were dealing
8 with water treatment and management. We ran a bit short
9 on time, and so I said that the first hour, to hour and a
10 half this morning, we'll also take questions regarding
11 water treatment and management, and that includes
12 groundwater at Baker Cree -- Creek, the diffuser, and all
13 other wet stuff that applies here.

14 What will happen for the rest of the day
15 is we're going to surface remediation, and so there'll be
16 a presentation by the developer, which I believe we can
17 complete before lunch, and then questions from the
18 parties for the remainder of the day with a break at
19 2:45, and we'll try to wrap it up by 5:00.

20 The Yellowknives Dene First Nation, in one
21 (1) of the planning meetings for this technical session,
22 raised a concern about agenda creep, I think that's the
23 phrase. But the -- the worry was if we can't get quite
24 enough done every day, then we're a little bit later each
25 day, and then the last day winds up getting pinched

1 because we don't have enough time to adequately address
2 the subjects.

3 But on each day we've got very important
4 matters to deal with, and the Yellowknives proposed an
5 additional day on Saturday. And we thought about it, and
6 decided that with focussed facilitation and some
7 flexibility during the week, we can avoid having Saturday
8 as an extra day.

9 Because we figured after five (5) days of
10 technical grilling, everyone would be pretty burnt out,
11 and we've noticed in the past that things tend to get a
12 little bit less productive the longer people have -- have
13 been at it sometimes. So we are not proposing to hold a
14 Saturday session. What I am proposing is if necessary
15 tomorrow to go late.

16 Now, I -- I'm hoping we can wrap up
17 surface remediation in the time we have left today, but
18 because we're going to do some water in the morning we
19 might not be able to do that. If that happens, things
20 might get bumped on a little bit.

21 Is there anyone on the Giant Mine team who
22 absolutely cannot stay on past 5:00 tomorrow?

23

24

(BRIEF PAUSE)

25

1 THE FACILITATOR EHRLICH: Going, going,
2 gone. So the Giant -- the developer is -- is okay with
3 doing that. In terms of the -- the parties, we'll --
4 we'll -- is there anyone in the parties who has a major
5 objection to going over time tomorrow, if necessary, and
6 I'll still try to facilitate officially enough so that --
7 you know, I -- I don't want to depend on tomorrow
8 afternoon, but -- after 5:00, but if it's absolutely
9 required, are you able to do it?

10

11 (BRIEF PAUSE)

12

13 THE FACILITATOR EHRLICH: Okay, great.
14 I'm seeing a lot of yeses, and I assume that for the
15 Review Board's experts there's no problem with staying on
16 past 5 if necessary. Okay. So that's the agenda change
17 that we're going to see.

18 We're -- we're going to work hard at -- at
19 getting through it in the time we've got, all right.
20 We're not going to lean on that extra time, but it's
21 there. This is us going out of our way to try and -- and
22 respond to a concern that the Yellowknives raised fairly
23 and early, and that we've -- we've committed to, you
24 know, try and avoid the problem they were worried about.
25 That's how we'll do it.

1 There are sign-in sheets -- are they
2 circulating, or are they at the door?

3

4 (BRIEF PAUSE)

5

6 THE FACILITATOR EHRLICH: Okay. This is
7 the sign-in sheet. If anyone hasn't signed it in, we're
8 going to put it at the little table next to the door, and
9 when you get an opportunity to -- to sign in, it -- it
10 makes a -- a difference to the quality of the
11 transcription if Wendy and -- and her service can see how
12 everyone's name is spelled. It makes it much easier for
13 them to track what's going on and when.

14 I'm pleased to report that the transcripts
15 for day 1 and day 2 are both available on the Web now.
16 I've said before they're searchable. You just hit
17 control F and you get a -- a very efficient way of
18 tracking many hours of discussion. They're available on
19 Wendy's website, which is tscript.com -- is that T hyphen
20 script? Tscript with no hyphen, one (1) word, dot com.
21 Go the repository -- go to the transcript repository,
22 select "Review Board," and then it's a calendar, and just
23 click on the days you want.

24 And so we applaud Wendy for her sorceress-
25 like efficiency. It's always amazing to me that they can

1 get hundreds of pages of transcript with really good
2 accuracy on our website while we were asleep. So thank
3 you for that, Wendy.

4 Is there anyone who's here today who
5 wasn't here for previous days? I'm going to try to
6 figure out how much of the opening comments I need to
7 repeat, because I'd -- I'd really like to get directly to
8 the good stuff. Everyone -- just about everyone looks
9 familiar. Who was not here on an earlier day?

10

11 (BRIEF PAUSE)

12

13 THE FACILITATOR EHRLICH: Excellent.
14 People are still reminded that the keys to the washroom
15 are by the little dish of mints at the end of the bar,
16 but the bar is not serving, no matter how long you wait.
17 And there were more washroom keys in that little dish;
18 there are less washroom keys now. If we run out, people
19 are going to be hopping around and talking very quickly.
20 So if you've accidentally put a washroom key in your
21 pocket, please bring it back there. They really need
22 them. They're in demand, and this is to benefit everyone
23 here. And I would suggest, if it was you, don't admit
24 it; just slip it back there sometime, because people who
25 need to go will not be understanding.

1 The -- as with the last couple of days,
2 there's some media interest in what's happening, because
3 Giant Mine is a subject that many people are interested
4 in. They've asked to take a few quick shots of the room.
5 It's a public setting. They've agreed to do so in a way
6 that's not obtrusive, so they're going to take a few room
7 shots at the beginning.

8 Yesterday, none of the parties objected to
9 us sharing our audio recording with CBC where they'd
10 asked. I assume that no one objects today. Is there
11 anyone who objects to that today?

12

13 (BRIEF PAUSE)

14

15 THE FACILITATOR EHRLICH: Okay. Then
16 it's still on. We know that the members of the Giant
17 team had an interview with CBC earlier, and, to us, it's
18 encouraging that CBC has been present for enough of this
19 so that they have a bit of a depth of understanding of
20 the subject matter, because we find that, the better
21 people understand this, the more accurate information can
22 be made available to the public, so we see this as being
23 generally helpful.

24 However, I will remind parties and media
25 that if there are -- is an interest in more interviews,

1 the purpose of this session is the technical exchange of
2 information between specialists and between parties; it
3 is not a media scrum. So I'm going to ask, if any other
4 interviewing happens, just as has been done in previous
5 days, it should be done in the hallways or in other
6 rooms, in breaks, before the session, after the session,
7 or at lunchtime.

8 That covers it. The day's going to go the
9 same way in terms of the order of questioning, which is
10 that, since this is not a hearing, the Review Board is
11 not here, it is an informal session where we're trying to
12 get through a number of issues. I'm going to remind
13 everyone that I'm not going to follow the order of
14 parties -- order of parties registration, as you would
15 have during a hearing. This is not a hearing. I'm going
16 to keep to the informal order that we've been following,
17 which is people who want to ask a question, please raise
18 a hand, and we'll do our best to get everyone's questions
19 in.

20

21 (BRIEF PAUSE)

22

23 THE FACILITATOR EHRlich: We're not going
24 to do a round robin this morning, because everyone who is
25 here today was here yesterday, and it's not that long to

1 remember. As well, everyone's reminded to say their name
2 at the beginning when they start speaking, which means
3 you -- you'll know who's talking. We're going to skip
4 the round robin.

5 I'm going to remind the developer, where
6 there are any divergencies or recent design developments
7 between the material you're presenting and what was
8 presented in the IR Responses or the Developer's
9 Assessment Report, it would be quite helpful to parties
10 if you made that quite explicit so that they understand
11 and are working with the most current information.

12 I would like to introduce my colleagues
13 briefly. You'll remember Paul Mercredi who was co-chair
14 yesterday, but Darha Phillpot over there will be co-
15 chairing once we get to surface -- surface remediation,
16 and she's sitting in for the morning. Darha is an
17 Environmental Assessment Officer with the Review Board.
18 Okay. That's enough of the opening pleasantries.

19 When we last left our intrepid group of
20 technical questioners, I think that Department of
21 Fisheries and Oceans, and Environment Canada had
22 questions. I think Alternatives North had questions and
23 I think the Yellowknives had questions, which you've all
24 kindly agreed to -- to sleep on.

25 Why don't we start with Department of

1 Fisheries and Oceans, because they were in the middle of
2 a series when we had to change the subject yesterday.
3 I'm guessing Morag McPherson is starting? Please go
4 ahead.

5 MS. MORAG MCPHERSON: Thank you. Morag
6 McPherson with Fisheries and Oceans. As mentioned
7 yesterday, there were a couple of responses to
8 Information Requests that came in that provided some
9 additional information from what was in the DAR. And
10 there was a couple of -- there was some information that
11 was provided in some of these responses that we had
12 identified where we'd like some additional clair --
13 clarification.

14 One (1) of those was Alternatives North
15 IR-6, that questioned potential impacts to Baker Creek
16 from fish and fish habitat, discontinuing discharge of
17 mine water into the creek.

18 In Response number 2 I think there was a
19 series of questions in the IR. In Response number 2 that
20 INAC -- or that the Giant Mine Team provided, it states
21 that:

22 "Currently there are no fish in Upper
23 Baker Creek between Marten Lake and
24 Baker Pond."

25 DFO is aware that sampling has been

1 conducted in 1998 in Upper Baker Creek, as well as more
2 recently in 2010 and 2011, and that fish, ninespine
3 stickleback, burbot, and Northern Pike have been found in
4 -- found in various areas between the inlet of Baker
5 Creek at Marten to right above the falls on the Giant
6 Mine site at Reach 6.

7 I guess we just felt it was important to
8 clarify some of this information in terms of the fish and
9 fish habitat in the upper parts of Baker Creek,
10 specifically given some of the discussions on the north
11 diversion.

12 So I just wanted to clarify what
13 references were used to support this statement, or was it
14 intended to say that there is currently no fish passage
15 into Upper Baker Creek, from -- from Baker Creek on the
16 mine site, versus there's no fish in Upper Baker Creek?

17 THE FACILITATOR EHRLICH: And over to the
18 Giant team. Who's going to be responding to this?

19 MR. ADRIAN PARADIS: Adrian Paradis from
20 INAC. Just give us half a sec here, I'm just going to
21 get a response for you here.

22

23 (BRIEF PAUSE)

24

25 MR. ADRIAN PARADIS: Adrian Paradis with

1 INAC. I apologize, you're right. You're correct, Morag.
2 It was -- the intention was to say no fish passage. The
3 mistake slipped through. I apologize.

4 THE FACILITATOR EHRLICH: But no fish are
5 slipping through, that's your point.

6 MR. ADRIAN PARADIS: No fi -- no fish are
7 slipping through, you're right.

8 MS. MORAG MCPHERSON: They're slipping
9 down, they're not slipping up. Morag McPherson. Morag.
10 Thanks very much for that clarification. Again, it was
11 just -- I feel it's important to have some of this
12 information clarified in these sessions when it's put
13 forward on the record in responses.

14 That leads me into some of the questions I
15 had on the north diversion as it's been proposed. There
16 were a couple of aspects of the -- how it was presented
17 yesterday in Nathan's presentation that I wanted to just
18 ask about.

19 One (1) of them was a statement that was
20 made about potentially opening this area up. Again, I
21 just wanted to clarify that it -- it is existing -- that
22 there are -- it is currently fish habitat, but it -- it
23 would be opening access for migratory species from Great
24 Slave Lake, and that that was sort of the intent of that
25 statement.

1 MR. NATHAN SCHMIDT: Yeah, Nathan
2 Schmidt. Yes, that was the intent of the statement and,
3 you know, any decision as to, you know, how far we would
4 design for fish passage of course would be done in
5 collaboration with DFO.

6 THE FACILITATOR EHRLICH: I -- I'd like
7 to point out that because we don't have a lot of time, I
8 very much appreciate how focussed the questions and
9 responses are. And I am going to encourage the parties
10 who have questions on -- on subjects relating to water to
11 just think through your questions to make sure that
12 they're -- they're -- you -- you say what you need to say
13 as concisely as we can so we -- we have a chance to get
14 in all the questions.

15 Morag McPherson, do you have any other
16 questions, or anyone else from DFO?

17 MS. MORAG MCPHERSON: Yeah, Morag
18 McPherson. Thank you. We did have one (1) other
19 question related to the north diversion.

20 It's our understanding at this point in
21 time that this option is being put forward as part of a
22 contingency plan in the event of an emergency scenario on
23 the Giant Mine site, and it is not being proposed as a
24 long term option for the remediation of Baker Creek.

25 Given this, given sort of how this has

1 been presented at this point in the process, when will
2 further information related to this contingency plan be
3 submitted to the Review Board and other parties in order
4 to be evaluated, and -- and included in the EA process,
5 and what information do you anticipate submitting?

6 I'll add just here, we -- we have some
7 thoughts on this, and just would recommend that -- that
8 there be some additional information submitted into the
9 process to assist in discussions on this, and that some
10 of the information that could be included or discussed at
11 this point in time that DFO feels would be important
12 would be some sort of definition of an emergency and
13 emergency scenarios onsite that would initiate
14 consideration of a north diversion; criteria that would
15 be used for decision-making related to the use of this
16 north diversion; a hierarchy or outline of contingency
17 measures and mitigation actions that would be conducted
18 onsite to avoid an emergency scenario, including such
19 things as a water management plan for Baker Creek.

20 And some sort of a con -- a conceptual
21 assessment at some point in terms of potential
22 environmental effects based on our current information
23 and understanding on the site from both the construction
24 and operation of a north diversion; effects to Baker
25 Creek in terms of short term operation of a diversion;

1 and effects to Baker Creek under potential long term
2 operating scenario.

3 So again, the question is just when will
4 additional in -- what -- what additional information
5 would be submitted, and when is it planned on being
6 submitted?

7

8 (BRIEF PAUSE)

9

10 THE FACILITATOR EHRLICH: Morag, while
11 the Giant team is discussing and preparing their
12 response, I'll also point out that day 4 of this
13 technical session deals with risk assessment and
14 contingencies are what you use for things you're not
15 planning on happening, happening. In day 4 there'll be
16 more flushing out of -- perhaps of what the contingencies
17 are for, and what kind of likelihoods are involved. Just
18 because of the order of the agenda we don't have that
19 under our belts already.

20 But I -- I think it would be useful for
21 you to come to that because, you know, this is one (1) of
22 the contingencies that is probably going to be discussed
23 on day 4.

24 Is the Giant team ready to go?

25 MS. LISA DYER: Thank you. Lisa Dyer. I

1 haven't spoken a lot this morning, sorry. Thank you,
2 Morag, for the questions and for giving us some, I guess,
3 ideas or kind of additional information that DFO would
4 like to see.

5 I was trying busily to write it all down
6 and there was a lot there, and I didn't get it all down,
7 so it would be nice to get that in writing, just so we're
8 all on the same page.

9 We can provide, I guess, clarification on
10 how we see the contingency being in place, and we can do
11 that -- it will take us a little bit of time. We can
12 talk about it, but again we're pressed for time right now
13 so we're more than happy to kind of provide a description
14 of how we see the contingency being employed, and we can
15 do that by November 14th. So we'll do this as an
16 undertaking.

17 THE FACILITATOR EHRLICH: Thank you. I'm
18 going to ask a question of our transcriptionist: Do we
19 start undertakings anew each day, or -- so this would be
20 Undertaking Number 5 on the record. And we'll rephrase
21 it during the -- the recap.

22

23 --- UNDERTAKING NO. 5: Giant Team to provide
24 clarification to the group on
25 how we see the Baker Creek

1 north diversion being
2 deployed as a contingency.
3 Provide the current thinking
4 and outline an approach to
5 the current thinking that the
6 project requires quick
7 summary of the process that
8 would be followed for any
9 authorizations for
10 contingencies. How would we
11 go about following the
12 directive from the inspector
13 for this work. Include a
14 discussion on the backwater
15 flow from the diversion entry
16 into YK Bay by November 15th.

17
18 THE FACILITATOR EHRLICH: I should also
19 remind parties that the -- where the Review Board in the
20 past has found an unacceptable risk that a project is
21 likely to cause significant adverse effects, it has made
22 measures that deal with, or reduce the risk, at certain
23 times in the past.

24 And I -- I know that the Giant team is
25 aware of that. I -- I just want to be sure that parties

1 understand that the Board has -- has done that in
2 environmental assessments in the past as well.

3 Does DFO -- I see nodding, so I'm taking
4 that as they understand. Are there any more questions
5 from Fisheries and Oceans?

6 MS. MORAG MCPHERSON: No, thanks. I
7 think that's it. I just want to clarify on that last
8 question that I guess the expectation wasn't that all of
9 that information, you would have that available
10 immediately, by November 14th. It's just more getting a
11 sense of when -- what the plans are, I guess, in terms of
12 submitting something more formally into the review
13 process here, I guess, related to this north diversion
14 and -- and sort of what you would envision being able to
15 be put forward.

16 So I'm not really expecting that all of
17 this information would be -- be able to be gathered and
18 put forward by November 14th, but just an idea of how
19 this is all going to be brought forward. Thank you.

20 MS. LISA DYER: Lisa Dyer. Just to
21 clarify, yeah, we -- we don't -- as I mentioned earlier,
22 this contingency is part of the work that we -- are
23 underway due to the directive that we've gotten, so we
24 don't have all the details at this point. What we can do
25 is provide the current thinking and outline a -- kind of

1 an approach to obtaining the information that -- that the
2 process requires.

3 THE FACILITATOR EHRLICH: Can I also
4 request, from the Review Board's perspective, that, in
5 the November 14th submission, you give a -- a quick
6 summary of what -- what process you would need to follow
7 for authorizations, should you pursue that contingency?

8 MS. LISA DYER: We can try and provide
9 that additional information. Again, that would -- are
10 you asking what we would apply for, or are you asking --
11 because the -- the Fisheries authorization or licensing
12 processes, I think, we can't make a judgment call on how
13 that will be applied. We could indicate what
14 requirements we see we would require.

15 So I -- I'm trying to understand if you're
16 asking for us -- us what regulatory instruments you think
17 we would require and how we would go about ob --
18 obtaining them, or are you asking us how this would apply
19 to the north diversion? Just a clarification.

20 THE FACILITATOR EHRLICH: I'm thinking
21 that one (1) of the things you got was a -- it sounded
22 like you had direction from an inspector that dealt, in
23 part, with looking at alternate routes for Baker Creek.
24 And if you need to do it, I'd like to know how you would
25 have to go about doing it.

1 MS. LISA DYER: Okay.

2 THE FACILITATOR EHRLICH: Do we have any
3 more questions from -- and, just for the record, Lisa
4 said, "Okay," just not into a microphone.

5 But, you know, I -- I'm talking about
6 maybe an extra page on the undertaking you were -- you
7 were discussing before. Please don't -- don't submit a,
8 you know, hundred-page treatise on the -- the details of
9 -- of what I just asked. Just a high-level summary would
10 be good.

11 MS. LISA DYER: Yes, we will provide
12 that. Thank you. Lisa Dyer, for the record.

13 THE FACILITATOR EHRLICH: Thank you. You
14 can -- you can tell I know I'm dealing with a productive
15 and thorough developer when I -- I specifically request
16 short things instead of long.

17 Now, does DFO have another question?

18 MS. MORAG MCPHERSON: It's actually more
19 of a -- Morag McPherson with Fisheries and Oceans. I
20 just want to make a statement of clarification, that my
21 understanding of the inspector's direction that was given
22 to the Giant Mine team was not to explore alternative
23 options for Baker Creek alignment. It was to prevent the
24 event that happened this spring from happening again.

25 And there's a number of contingencies and

1 measures that could be put on place in site during normal
2 operation of site that -- that I think that a complete
3 diversion of the creek north is a contingency, but was
4 not a requirement to be looked at under the inspector's
5 direction.

6 MS. LISA DYER: That is correct, Morag.
7 We -- we have -- we are looking at it as a viable
8 contingency. We were not directed to look at the north
9 diversion specifically. There are a number of
10 contingency measures that we are exploring, and this is
11 one (1) of them.

12 THE FACILITATOR EHRLICH: It's Alan
13 Ehrlich. We're glad you're exploring it, since you've
14 identified that Baker Creek presents certain risks to the
15 site. These are risks to a new application in an
16 important setting, and your project is intended to work
17 for perpetuity. So any potential risks to underground
18 arsenic containment are things that the Board's going to
19 certainly look at and -- and consider, and you've
20 identified that -- that Baker Creek is -- poses a -- a
21 few different onsite risks with that respect.

22 Some of this is about satisfying the
23 Department of Fisheries and Oceans regarding their
24 mandate. Some of it is not about fish or fish habitat,
25 it's about the potential significant adverse

1 environmental impacts of the project, which means that
2 your goal is not necessarily just to satisfy DFO's
3 interest in that, but to at least make sure that the
4 Review Board understands your thinking so it can make a
5 long-term decision that -- that does what its mandate
6 requires it to do.

7 On that very subject, since DFO has talked
8 about things that prevent bank overtopping, or the -- the
9 inspector's direction before, I -- I'd like to ask a
10 question of my own. In response to Review Board
11 Information Request number 20, the developer wrote that:

12 "The remediation for -- [okay] extreme
13 floods do pose at -- risk to the water
14 management system if they lead to water
15 levels high enough to overtop the banks
16 of Baker Creek and then flood the
17 underground mine. The remediation plan
18 for Baker Creek recognizes that risk
19 and, in fact, minimizing the risk of
20 bank overtopping is the primary
21 objective of the Plan."

22 But you didn't actually give any details
23 about how you propose to minimize the risk of bank
24 overtopping in that IR response.

25 Could you give a -- a short summary of --

1 of some of the physical mechanisms that you're -- you're
2 proposing to minimize the risk of bank overtopping.

3 MR. NATHAN SCHMIDT: Nathan Schmidt. I
4 think we'd identified three (3) of the areas that we're
5 most concerned about at the B1, C1, and A2 pits, where
6 there's direct potential for spillage at high water
7 levels. That's been identified.

8 At C1 Pit and A2 Pit, we've actually got
9 channel diversions planned that take the channel further
10 away. It also reduces the constrictions of the existing
11 channels there and increases the conveyance capacity.
12 That prevents water from backing up upstream and reduces
13 the upstream water levels. So, in providing that extra
14 conveyance capacity the design flood levels drop, okay.

15 In other instances we've also got
16 increasing elevations of the -- the material beside the
17 creek, okay. So, we've got higher banks essentially.
18 And, in particular, at the B1 Pit, there's a bit of a
19 dyke planned in that area to -- to prevent any -- any
20 overtopping into the underground there.

21 THE FACILITATOR EHRLICH: Thanks. I -- I
22 picked up parts of that during the presentation this
23 morning -- yesterday morning, and I'm not sure if I -- I
24 blinked and missed parts of it, but I -- I think that
25 helps.

1 So, you're talking about making channels
2 wider, moving them further from the pits and raising the
3 edge of the channel towards the pit where you don't have
4 the topography that lets you move the creek away from the
5 pit.

6 Do I have that correct?

7 MR. NATHAN SCHMIDT: That's correct.

8 THE FACILITATOR EHRLICH: And --

9 MR. NATHAN SCHMIDT: Nathan Schmidt.

10 THE FACILITATOR EHRLICH: Thanks. And --
11 and, Nathan, in -- in areas where -- where you have
12 limits like topography, you don't have a flood plain to
13 work with, the amount that you've raised channel walls,
14 I'm taking it that the indicator of that is you've raised
15 them to the design criteria that you've described. I
16 think it was a 1 in 500 year flood event, right?

17 MR. NATHAN SCHMIDT: Nathan Schmidt.
18 Yeah, that's correct, with the allocation for -- for
19 anchor ice as well as freeboard.

20 THE FACILITATOR EHRLICH: I'll -- I'll
21 save any other questions I got on that until the risk
22 assessment day. Let's go back to Department of Fisheries
23 and Oceans.

24 MS. MORAG MCPHERSON: Morag McPherson,
25 Fisheries and Oceans. We have no further questions.

1 Thank you.

2 THE FACILITATOR EHRLICH: How about
3 Environment Canada? Lisa Lowman and Amy Sparks have been
4 waiting patiently. Do you have other questions that
5 either on the que -- either on the subjects you were
6 starting on yesterday, or on other aspects regarding
7 water and water management?

8 MS. AMY SPARKS: Amy Sparks, Environment
9 Canada. I have a question about Baker Creek. I
10 understand that once the effluent isn't released into
11 Baker Creek anymore, it's going to be considered more
12 natural conditions and there will be changes made, but do
13 you expect to see any potential chemistry changes with
14 those sediments being oxidized and remobilized, any --
15 any potential effects that we're going to see on that
16 route?

17 MR. BRUCE HALBERT: Bruce Halbert. I
18 wouldn't expect to see any change really in the chemistry
19 down through that system. It's -- sediments are exposed
20 today under low flow conditions, so that's not really
21 changing, if you will, in -- in the overall picture of --
22 of time, so, no.

23 THE FACILITATOR EHRLICH: Amy Sparks...?

24 MS. AMY SPARKS: Amy Sparks. Thank you.

25 THE FACILITATOR EHRLICH: Does

1 Environment Canada have any other questions regarding
2 water, and water management?

3

4 (BRIEF PAUSE)

5

6 THE FACILITATOR EHRLICH: Okay. And
7 remember that if questions do come up that relate to
8 things like risk assessment, or the monitoring,
9 evaluation, and -- and followup, there are also other
10 opportunities to ask them.

11 I'm going to keep going around the table
12 to Alternatives North. Kevin, do you have other
13 questions on water and water management that you didn't
14 have a chance to ask yesterday?

15 MR. KEVIN O'REILLY: Thanks, Alan. Kevin
16 O'Reilly, Alternatives North. Well, I want to thank DFO
17 for asking the questions around the north diversion
18 because that was on my list, but they were able to
19 actually do it much better because they understand the
20 terminology better than I do. So thank you for doing a
21 good job.

22 I did want to ask some questions around
23 the water treatment plant design, I guess. On the slides
24 it talked about a high test minewater stream with arsenic
25 levels up to 7,300 milligrams per litre.

1 have to allow for some dilution or whatever before it
2 goes in?

3

4 (BRIEF PAUSE)

5

6 MR. ROBERT BOON: Yeah, Bob Boon. The
7 equipment that has been used in the pre-design is up to
8 three thousand (3,000).

9 MR. KEVIN O'REILLY: Okay, thank you.
10 Kevin O'Reilly, Alternatives North. I want to ask
11 another question then if I can.

12 THE FACILITATOR EHRLICH: Please go
13 ahead.

14 MR. KEVIN O'REILLY: It's about sludge.
15 And maybe I missed it in the DAR, but I'm hoping that
16 they can just briefly dis -- the developer can briefly
17 describe the chemistry of the sludge, its stability, a
18 little bit about toxicity.

19 And why I want to know this is -- maybe it
20 slips over into today's topic, is, are there any special
21 design considerations in disposing of the material, given
22 its chemistry, stability, and toxicity? Thank you.

23 THE FACILITATOR EHRLICH: Thanks for
24 that, Kevin. Does the Giant team need a moment to
25 discuss that, or are you good to go?

1 (BRIEF PAUSE)

2

3 MS. LISA DYER: Lisa Dyer. I'm going to
4 ask Kyla and Till to answer that question. I'm just
5 going to give them a couple of seconds to just clarify
6 their answer.

7

8 (BRIEF PAUSE)

9

10 MS. KYLA KIRK: Kyla Kirk. Based on what
11 we're -- the chemicals that we're using in the treatment
12 process, we have an idea of what sort of solids will be
13 produced. Some of these include manganese dioxide from
14 the oxidation process, ferric arsenic from adding the
15 ferric sulphate in. We'll have metal hydroxides because
16 we are adding lime to precipitate these metals. We
17 should have some excess lime in the sludge and total
18 suspended solids.

19 The only one that might be a bit unstable
20 is the ferric arsenic, but lime addition will help
21 stabilize the sludge in that case. And we are planning
22 to do some bench scale testing and pilot testing on the
23 sludge that's produced, so we can have a better idea of
24 what the characteristics would be; the percentage of
25 solids that we produce.

1 And as for the special design
2 considerations, that will probably come out today in the
3 surface.

4 THE FACILITATOR EHRLICH: Kevin, do you
5 have follow-up?

6 MR. KEVIN O'REILLY: Sure. Thanks.
7 Kevin O'Reilly, Alternatives North. Just wondering about
8 the timing, then, of the bench scale testing, and whether
9 that's going to be done as -- before the environmental
10 assessment's finished or not.

11

12 (BRIEF PAUSE)

13

14 MS. LISA DYER: Lisa Dyer. One (1) of
15 the things I want to refer people to is that we've been
16 using the same technology for the past twenty (20),
17 thirty (30) years at Giant, and we don't expect the
18 characteristics of the sludge to be much different than
19 what we currently have. So, this is a technology that
20 we're familiar with, and we have a lot of information on
21 the sludge characteristics already.

22 That being said, we are planning to do
23 some bench scale testing this fall. That bench stel --
24 scale testing will allow us to confirm reagents and
25 reagent addition and the proper sequencing of that. As

1 well, it will allow us to confirm the sludge stability.

2 But I'd just like to refer back to that we
3 have been using this same treatment process at Giant
4 Mine, and so we are very confident with the performance
5 of the system, and we will be talking more about our
6 sludge management plans in a presentation this afternoon.
7 Thank you.

8 I think I said "Lisa Dyer," didn't I?

9 THE FACILITATOR EHRLICH: I think I heard
10 it. Kevin...?

11 MR. KEVIN O'REILLY: Thanks, and that's
12 for that clarification. That's helpful. I guess this is
13 the kind of detail, in terms of ongoing research and
14 where it's headed, that I think would be really helpful
15 to have in your -- I'm not going to get the terminology
16 right, or the acronym, E-M-E-F, or whatever it is, in
17 terms of what ongoing research you have and how that fits
18 in -- into your overall development of closure criteria,
19 performance criteria. So -- but thank you for the -- the
20 response.

21 My -- my last question is about -- I think
22 in response to Alternatives North 21, one (1) of our
23 questions there was about the C Shaft and the -- how it's
24 no longer available to do stratification sampling of the
25 minewater. And -- but in the response from the

1 developer, they say that they are looking at alternate
2 methods for stratification sampling, and I wonder if they
3 can tell us something about what their thinking is there.
4 Thanks.

5

6 (BRIEF PAUSE)

7

8 MR. ADRIAN PARADIS: Adrian Paradis,
9 INAC. Just give me half a sec while we get the IR out.

10 MR. KEVIN O'REILLY: If you like, I can
11 read it. It's on page 2. Sorry, Kevin O'Reilly. It's
12 on page 2:

13 "INAC is working on alternative methods
14 for stratification sampling."

15 So, I'm just curious to know, what are
16 those alternative methods? What's the thinking there?
17 Thank you.

18

19 (BRIEF PAUSE)

20

21 MS. LISA DYER: Lisa Dyer. In the
22 interests of time, I think the colleagues are going to
23 need a little bit more time to provide an answer to this.

24 Can we move on and then come back, or do
25 you have an answer?

1 MR. ADRIAN PARADIS: Yeah. I can try and
2 answer this at little bit. I don't have an answer for
3 you right now, but we'll go back. We have to go back and
4 pull up some of the reports from 2009, and this is Tara's
5 (phonetic) speciality. So, what we'll do is we'll try
6 and, like, go back, look at it, and provide a response
7 later this -- hopefully by the end of this day. If not,
8 we'll follow it up in writing and provide it.

9 THE FACILITATOR EHRLICH: Thanks. So
10 let's mark that as a task --

11 MR. ADRIAN PARADIS: Yes.

12 THE FACILITATOR EHRLICH: -- for the end
13 of the day, which will become an undertaking if you're
14 not able to do it during the course of the technical
15 sessions. Okay. We got it.

16 Kevin's got one (1) question, and the way
17 he waved his hand makes me think it will be quick.

18 MR. KEVIN O'REILLY: Yeah, I -- well, I'm
19 never sure if my questions are -- the responses are quick
20 or whatever. Thanks. Kevin O'Reilly, Alternatives
21 North.

22 I guess the -- I want to -- I think that
23 the reas -- I want to understand the reason for why the -
24 - the developer wants to do this stratification sampling.
25 Presumably, it's so that you understand, or better

1 understand, where the major sources of arsenic are
2 underground, and that you try to -- or that you will look
3 at ways to better isolate or control the -- the flow or
4 arsenic from those areas. That's presumably the reason
5 why you want to do stratification sampling.

6 MR. BRUCE HALBERT: Bruce Halbert.
7 Sorry. You got my name, though, right? Bruce Halbert.
8 I'm going to refer to Table 14.2.1 in the -- in the DAR,
9 and in there, there's a -- a water quality monitoring
10 program laid out for the -- the minewater itself.

11 Currently, there is a multi-port sampling
12 device, if you will, at the C Shaft, and in the future
13 it's proposed that we install seven (7) additional multi-
14 port sampling devices down through the various levels.
15 As I would understand, the reason for the objective of
16 the monitoring is to characterize arsenic and other
17 parameters throughout the mine workings, see how the
18 levels are changing over time, whether there's a
19 particular area that -- that's still a contributing
20 source, but ultimately you're looking to establish: are
21 we over time progressively improving the water quality
22 within the mine.

23 The fact of sampling at -- at multiple
24 levels doesn't mean we're drawing the water -- the bottom
25 waters up into the treatment system. In fact, water at

1 the bottom will -- will stay at the bottom. If it
2 stratifies, then it wouldn't become the feed to the
3 treatment system.

4 So it's a characterization program
5 ultimately intended to provide information on the
6 characteristics of minewater, and how -- how it evolves
7 going forward.

8 THE FACILITATOR EHRLICH: Okay. Todd
9 Slack, and, Lukas, your -- your name has fallen and I've
10 forgotten your last name, but can you put your -- your --
11 is it Novy?

12 Todd Slack and Lukas Novy for the
13 Yellowknives, you indicated yesterday that you had some
14 questions. Please try to -- try to keep it concise if
15 possible, but go ahead.

16 MR. LUKAS NOVY: Thanks for that, Alan.
17 Yeah, it's Lukas Novy here for the Dene. And I have a
18 specific question related to -- it was somewhat brought
19 up by Environment Canada, but with the uptake of
20 sediments, and contaminant movement into Baker Creek.

21 And I'm just wondering how that was
22 accounted for in the current evaluation of arsenic loads
23 into Baker Creek?

24

25 (BRIEF PAUSE)

1 MS. LISA DYER: Lisa Dyer. I'm going to
2 ask Bruce Halbert to speak to this issue.

3 MR. BRUCE HALBERT. Thanks, Lisa. Bruce
4 Halbert. Could I just get you to restate that -- that
5 question, just so it's clear in my mind just what you're
6 actually asking.

7 MR. LUKAS NOVY: I just want to know the
8 -- I guess I want to know how sediments -- arsenic
9 sediment contamination and it's uptake into the water --
10 water stream was accounted for in the modelling of
11 arsenic loads.

12 Does that help?

13 MR. BRUCE HALBERT: Indeed. Bruce
14 Halbert again. As far as Baker Creek is -- is concerned
15 specifically in that element of the -- of the overall
16 surface water environment, the loads are -- are accounted
17 for in the measured data coming off that system. So over
18 time, there's been data collected at the mouth of Baker
19 Creek, and at various points throughout that system, and
20 by inherently the sour -- the contributions from all
21 sources are included in that analysis.

22 That -- that is part of the load
23 assessment that I referred to in my presentation
24 yesterday. We're not explicitly differentiating the load
25 from sediments from other drainage coming into Baker

1 Creek.

2 We are explicitly accounting for sediment
3 contribution within Back Bay, Yellowknife Bay, et cetera,
4 but for Baker Creek itself it's -- it's an inclusive
5 load.

6 MR. LUKAS NOVY: Lukas Novy. So I just
7 want one (1) clarification on that answer. So would that
8 be in the -- in the two-twenty (220) runoff from --
9 runoff from surface facilities to Baker Creek would that
10 -- where that sediment uptake would encompass?

11 MR. BRUCE HALBERT: It's part of the
12 overall load at the mouth, yes. There's a two-twenty
13 (220) coming in from upstream. There's additional
14 contributions coming in from the various watersheds, sub-
15 basins, if you will, both to the west of the Giant Mine
16 site and -- and the mine site itself. And inclusively
17 within that, we're capturing the sediment contribution.

18 MR. LUKAS NOVY: Lukas Novy here. So I
19 just have a follow-up question to that, and it ties into
20 the sediment program that's -- I think it was indicated
21 that it's -- it's still a work in progress.

22 But my understanding is the discussion
23 from that has been primarily based on a fish habitat
24 point of view, and I just had an overall question on how
25 -- whatever results come from that -- and what is the

1 overall focus of that?

2 And if -- if it is to limit the arsenic
3 load, how's -- what type of monitoring or mechanisms are
4 going to be used to evaluate how successful that is going
5 to be in terms of arsenic concentrations?

6

7 (BRIEF PAUSE)

8

9 MS. HILLARY MACHTANS: Hillary Machtans,
10 Golder Associates. I can speak to the -- the purpose of
11 the Sediment Study and how the data might be used and
12 then we can see if we can get to the part two (2) of your
13 question.

14 So the purpose of the Sediment Study is --
15 is to assess, I guess you could call it par -- in part
16 for fish habitat, but primarily what we call ecological
17 risk and human health risk. So it -- it's good to take
18 all the data from the top to the bottom of the creek
19 that's on the property and take those concentrations and
20 say, Are they a theoretical risk to fish, and bugs, and
21 plants, and humans, and then say in -- and then, Are they
22 a real risk, are the fish actually uptaking that arsenic;
23 are the plants actually taking that up. So that's how we
24 intend to use that. That's the primary purpose of the
25 study.

1 A secondary purpose of the study is to
2 inform the remediation options, so sediment thicknesses,
3 arsenic values, and -- and other metals, not just
4 arsenic, along the stream. So that -- the final
5 decisions on some of the Reaches, so we can decide, I
6 guess those -- the really hard question of sediment in or
7 sediment out.

8 So I would -- I would assume that we would
9 not answer the question, your part two (2) of your
10 question which is what do we do -- how does that inform
11 arsenic loading in the future. I don't think we can
12 answer that question yet, because we would take the
13 results of the study to inform the final remediation
14 choices. And, Nathan, correct me if -- if I'm wrong, so
15 then we would -- we would not yet have those numbers to
16 know future arsenic values. So if I understand what
17 Bruce is saying correctly, we're going on current values
18 now to be conservative.

19 Does -- does that answer your question?

20 MR. LUKAS NOVY: Yeah, it does. It gives
21 me an understanding of what -- what is trying to be done
22 with the sediment program.

23 So I just have one (1) more quick question
24 on the -- the scenario where that two twenty (220) load,
25 from the -- runoff from the surface facilities in its

1 current state and in the post-remediation state, how much
2 -- what is exactly -- what remediation activities are
3 lowering -- or proposed to lower that, and -- and where
4 does that -- where does the sediment at all tie into
5 that?

6 MR. BRUCE HALBERT: Bruce Halbert. We
7 took a fairly conservative approach here in that we have
8 an assessment of what the -- the low contributions are
9 coming from various sub watersheds from the site area, in
10 and around the site area.

11 In the assessment moving forward, I
12 believe you'll -- you'll note that I only -- we only
13 accounted for a reduction from two twenty (220) to one
14 ninety (190) in the contribution from the site.

15 And basically what we've -- the approach
16 we've taken is to say we don't have sufficient basis to
17 say we're going to drop that by 50 percent, 75 percent,
18 whatever. So we're going to take it in a conservative
19 approach in moving forward in the assessment and that's
20 what we -- how we approached it.

21 So we have not accounted for the benefits
22 that would be derived, let's say from the remediation
23 work on sediments in Baker Creek, whether that's removal,
24 or capping, or whatever the -- the ultimate program is,
25 as that has not been defined yet.

1 So that could be a refinement down the
2 road in the assessment point of view, but that is the
3 approach what we took here, to be -- to be fairly
4 cautious in what we're doing.

5 MR. LUKAS NOVY: Lukas Novy. Thanks for
6 that. That actually puts -- puts me more at peace of
7 mind that there was a conservative approach and hopefully
8 down the road that as long as there's mechanisms to
9 measure that future success, then that's -- that's a step
10 forward, in my opinion. Thank you.

11 THE FACILITATOR EHRLICH: Great. As you
12 heard yesterday I love it when developers are willing and
13 able to give robust enough responses to help parties
14 decide what issues they do and -- and don't need to carry
15 further.

16 I think there's another question from the
17 Yellowknives Dene. Todd...?

18 MR. TODD SLACK: Thanks, Alan. Todd
19 Slack, YKDFN. I have two (2) things that I think are
20 perhaps best suited as tasks, and then one (1) question.
21 The first potential task, and I'll leave it up to the --
22 the crew if they want to take it as such, in -- and I
23 spoke to Hillary yesterday off the record about this, but
24 I think it's important to get something on the record.

25 In Information Request 13 from the

1 Yellowknives Dene First Nation I'm going to read a
2 sentence here:

3 "The results of the environmental
4 effects monitoring work on Baker Creek
5 has shown some differences in the
6 health of fish from the creek versus
7 fish taken from unaffected reference
8 area, with the condition factor being
9 higher for sentinel species in the
10 exposure, i.e., Baker Creek."

11 Now, the implication of this sentence
12 seems to suggest that fish out of Baker Creek are
13 healthier, and while I understand that the EEM data may
14 suggest that the condition factor for what was actually
15 sampled shows that they have a higher condition factor,
16 it seems that there's a great number of limitations that
17 go along -- or caveats that go along with this sentence.

18 And I'm just wondering if Baker -- or, not
19 Baker, pardon me -- the Giant Mine team or perhaps Hilary
20 would like to take on submitting a memo that further
21 explains the -- essentially, what you told me last night,
22 or if you wanted to enter it into the record now,
23 whatever you would prefer, but I'm sure there'll be
24 questions for that.

25 THE FACILITATOR EHRLICH: Hilary, the

1 Review Board's preference, if you're comfortable with it,
2 is reiterating it now, because one (1) of the things
3 we're trying to do is cut through having a huge amount of
4 material, written number of documents on the record,
5 because it can be quite cumbersome, as you've seen in --
6 in other EAs sometimes.

7 If you're comfortable with summarizing
8 that now, and if the Yellowknives agree that -- that what
9 you just said matches the discussion that was being
10 referred to, that's our preference. If not, then it's
11 okay to do is as an un -- a written undertaken.

12 MS. HILARY MACHTANS: Hilary Machtans,
13 Golder Associates. I -- I'm reasonably comfortable. I
14 mean, it's up to you to decide if I've given a -- an
15 appropriate response.

16 What we discussed yesterday was whether or
17 not the -- the sentence in IR-13 which says the condition
18 factor is higher based on the environmental effects
19 monitoring studies, what that implies. And I would -- I
20 think my statement now is it's an ambiguous statement,
21 and I could clarify that.

22 So it -- it could be taken either way.
23 What -- what the particular statement is, is -- is
24 condition factor. Condition factor in fish is usually
25 the bigger the number, the better they are, the more sort

1 of robust they are. So the implication in the IR could
2 be that fish in Baker Creek are more robust. I'd argue
3 it's just not a clear enough statement, and it doesn't
4 appropriately summarize the entire EEM program. So I --
5 if you'd -- I could take just one (1) minute to clarify
6 that.

7 So the Giant Mine EEM program has been
8 going on since 2003, and it's designed to study the
9 effects of the effluent, not the sediment, effluent only.
10 It uses two (2) sentinel species, and by "sentinel," we
11 mean small-bodied species that you might expect to see
12 effects to fish first. So that's not usually large-
13 bodied species.

14 In the case of Giant Mine, the two (2)
15 sentinel species are the nine spine stickleback and the
16 slimy sculpin. We saw different things in each fish.
17 The nine spined stickleback are -- have a higher
18 condition factor. They are slightly larger in Baker
19 Creek than they are in a reference area.

20 We see similar things at the Con Mine.
21 There can be a variety of reasons for that. It could be
22 temperature, the water's warmer in Baker Creek slightly,
23 and there's more food; it could be slightly negative,
24 meaning the -- the bodies are more stressed by -- and
25 they've tak -- they have more processes going on in their

1 is showing there are some differences between Baker Creek
2 and a reference area. Some of them could be positive;
3 some of them could be negative. It's fairly likely that
4 it is not due to effluent, but some differences may be
5 either due to temperature or due to sediment
6 concentrations.

7 Does that help?

8 THE FACILITATOR EHRLICH: Todd...?

9 MR. TODD SLACK: Todd Slack, YKDFN. Can
10 I ask two (2) points of clarification on that.

11 Can you confirm that the -- what the
12 reference in this case is? And number two (2), the --
13 the study that's referred here, you said it started in,
14 sorry, 2003 or 2004, when was the report written, and
15 like what was the end date of that -- that sampling
16 period?

17 MS. HILARY MACHTANS: Hilary Machtans,
18 Golder Associations. Yes, the Giant -- all EEMs in
19 Canada are on a regular schedule, if you will, so they
20 run every two (2) years, or every three (3) years.

21 So the Giant Mine would have done theirs
22 2003 to 2005, 2005 to 2008, and 2008 to 2010, so they've
23 just as of June 2011 submitted their -- their report.

24 And then we're awaiting Environment
25 Canada's decision on next study steps. I believe those -

1 Giant Mine remediation project team
2 position that this type of monitoring
3 will provide a much more useful insight
4 into the recovery and health of Baker
5 Creek, as opposed to adopting an
6 arbitrary arsenic concentration target
7 that may not be achievable."

8 While I understand the very last point of
9 that sentence, I'm wondering if the project could comment
10 on why they see the CCMEs as arbitrary, because it's my
11 understanding of these guidelines that they're anything
12 but arbitrary.

13 Hard targets are the -- the exact
14 opposite, I would have thought.

15
16 (BRIEF PAUSE)

17
18 MS. LISA DYER: I'm going to ask Bruce
19 Halbert to respond to this. Lisa Dyer.

20 MR. BRUCE HALBERT: Thanks, Lisa. Bruce
21 Halbert. Indeed, the CCME guidelines are not arbitrary.
22 That's not the -- the question here. They are -- they
23 are defined, if you will, to be protective of all aquatic
24 species, even the most sensitive species, with a safety -
25 - a factor of safety built into it.

1 But the fact is, on Baker Creek coming
2 into the site from upstream, our arsenic levels run in
3 the order of 20 to 60 micrograms per litre, which is
4 above the criteria we're talking about, or the guideline
5 value we're talking about here of five (5). So baseline
6 by itself in this particular system is elevated. So the
7 guideline, there -- this doesn't apply in -- in this
8 particular application.

9 THE FACILITATOR EHRLICH: Todd, if you
10 don't have any more questions, we've got a few more
11 questions on water that we still want to get through, and
12 we know that the Giant team's experts will only be here
13 for a short time.

14 Are you okay with what you just heard?

15 MR. TODD SLACK: Yeah, I'm okay, but I
16 had one (1) more thing that I think could be added to
17 what DFO was talking about previously in terms of the
18 diversions and the -- the memo, or the undertaking.

19 And so this suggests the task, if the
20 project team is willing to -- to take it on, includes two
21 (2) -- two (2) particular paragraphs. One (1) would be
22 the volume associated with the rock cuts of each of the
23 diversions, and number two (2) would be a discussion in
24 terms of backwater flow as that div -- as those
25 diversions enter into the top of Yellowknife Bay is I

1 guess how I'll describe it.

2 As the project team knows, the water
3 management plant is very close and I've seen water moving
4 backwards up that river, at least on the surface. So a
5 discussion about that and how they anticipate dealing
6 with this, or modelling it, or what they think about
7 this, would be very interesting.

8 THE FACILITATOR EHRLICH: I'm going to
9 request those as written undertakings. I think that's a
10 level of detail that's probably beyond what -- oh, one
11 (1) of them can be answered on the spot.

12 Mark Cronk, from the Giant Team...?

13

14 (BRIEF PAUSE)

15

16 MR. NATHAN SCHMIDT: Nathan Schmidt. I
17 just want to address the question about the rock cuts,
18 because we have those numbers at hand. There are really
19 three (3) cases we're looking at. One (1) is the DAR
20 case; one (1) is the design variant that we talked about,
21 where Reach 3 goes in a deep cut around the west side of
22 C1 Pit; and then the third one (1) is the north
23 diversion.

24 And for the two (2) -- for the DAR case
25 and the DAR variant, we're -- our numbers are -- I --

1 I'll say a lot more certain than for the north diversion.
2 The north diversion one, remember there were no surveys,
3 it's all done on the basis of the digital elevation model
4 from the City of Yellowknife, okay.

5 But to give you some sort of, you know,
6 way to compare them, for the DAR case, for the rock cuts,
7 we're looking at about 230,000 cubic metres. For the DAR
8 variant, with the deep cut, about nine hundred and forty
9 thousand (940,000). And for the north diversion we'd be
10 looking at around 1.2 million.

11 So, you know, the DAR variant is about
12 four (4) times as much as the -- the DAR base case. And
13 the DAR -- and the north diversion is about five (5)
14 times as much as the base case. I would like to say
15 though that we've got some potential synergies here where
16 we're going to need a lot of rock to be quarried for
17 tailings covers and that sort of thing, and so we are
18 looking into ways that we can, you know, get a lot more
19 bang for our buck. So the actual incremental cost isn't
20 going to be like what you see on its face.

21 THE FACILITATOR EHRLICH: So, Todd, with
22 that, are there any remaining undertakings that you're
23 asking Giant to -- to produce? When I say, "Giant", I
24 mean the Giant team, of course.

25 MR. TODD SLACK: No, that completes our -

1 - my line of inquiry, or my line of questioning. So --
2 sorry, but including the -- the backwater flow associated
3 with north diversions.

4 THE FACILITATOR EHRLICH: And is the
5 Giant team prepared to produce something in writing by
6 November 14th regarding -- in response to the YKDFN
7 question about backwater flow and the diversions?

8 MS. LISA DYER: Would it be possible to
9 add this to the undertaking that we're doing for DFO, the
10 request to provide more information on the contingency
11 plan of the north diversion, then we can include this in
12 that and do it as one (1) undertaking, to build on that
13 information?

14 THE FACILITATOR EHRLICH: Are you
15 producing that for November 14th?

16

17 (BRIEF PAUSE)

18

19 MR. NATHAN SCHMIDT: Yeah, Nathan
20 Schmidt. I just want to say we'll -- we'll do our best
21 based on available information. I -- I'm not sure right
22 now exactly what sort of topographical data and river
23 elevation, like a stage discharge rating curve for the
24 river at that location.

25 So the -- the level of detail will depend

1 on the information we have, but we could at least do a
2 first cut for it.

3 THE FACILITATOR EHRLICH: And are you
4 prepared to do that by November 14th?

5 MR. NATHAN SCHMIDT: Yes.

6 THE FACILITATOR EHRLICH: I'm going to
7 encourage the Giant Team, I've noticed at some -- past
8 experience in various EAs shows that the transcription
9 service does its best to identify the wording of the
10 commitments, and -- and -- or of the undertakings, and --
11 and produce them at the beginning of the transcripts.

12 But very often the nature of the
13 information that's sought is described in the discussion
14 surrounding the original commitment to do -- do the
15 undertaking, and isn't necessarily captured in the little
16 snippet that describes the undertaking at the beginning
17 of the transcript.

18 So I want to remind parties that when
19 you're looking at undertakings, and you're trying to
20 remember what they were, please don't just use the stuff
21 at the beginning of the transcript but go back into the
22 transcript, examine the discussion immediately preceding
23 the undertaking (phonetic) because, you know, the -- the
24 -- it tends to reduce the amount of back and forth if you
25 remember the initial context. I -- I just think that's

1 quite an important point.

2 On the same subject that the Yellowknives
3 were asking recently, my read on the DAR Section 7.1.3.1
4 dealing with water quality guidelines, I've got a couple
5 of questions that relate to the effects concentration
6 that was reported by SENES in 2006.

7 You're talking about CCME freshwater
8 arsenic guidelines as an indicator of potential economic
9 degradation. You're saying it's fundamentally
10 conservative. Of particular importance you say:

11 "Freshwater fish have demonstrated a
12 lower sensitivity to arsenic than
13 either invertebrates or algae. For
14 example, as reported in SENES 2006, an
15 effects concentration of 20 percent of
16 the population of predator fish, such
17 as Northern Pike or Lake Trout, was
18 calculated to be 140 micrograms per
19 litre."

20 And, you know, when I -- I read this -- I
21 mean, the -- assuming that effects concentration, I'm
22 guessing that's for arsenic in isolation, all right.
23 Does that also consider what's actually happening in the
24 fish?

25 I mean, fish up here tend to have slightly

1 higher mercury loads than some down south may due to
2 various mechanisms that you know and understand, and the
3 physiological response of a combination of contaminants
4 on those fish may not be the same as the physiological
5 response of a single contaminant in isolation. But
6 what's actually happening in these fish is that the real
7 world is effecting them in -- in many different ways.

8 Is it safe to say that that 20 percent
9 number is accurate for the fish in Baker Creek not just
10 imagining that arsenic is the only contaminant that is
11 affecting them, but in -- in line with what we actually
12 know about other contaminants in the system, such as
13 mercury?

14 MR. BRUCE HALBERT: Good question, Alan.
15 Bruce Halbert. The toxicity values that are used in
16 these types of assessment are based on test work done in
17 laboratories. So obviously it's different species in
18 some cases, and certainly they've had different life
19 exposures than fish perhaps here or elsewhere.

20 So these -- these values are applied in a
21 broad scale. They don't recognize any interactions, if
22 you will, between different -- exposure to different
23 contaminants, whether it's mercury and arsenic, or -- or
24 other elements in the environment.

25 The test work is -- is specific to an

1 element, and what other conditions they're exposed to,
2 right. So it's -- it's not -- it's not an absolute
3 number, but they provide us the best guidance we have at
4 this point in time in our scientific world.

5 THE FACILITATOR EHRLICH: Thank you for
6 that. On the same subject, if it's laboratory tests I'm
7 guessing Rainbow Trout are probably the predatory fish
8 that are being used. Are there differences between
9 species' responses to different kinds of contaminants?
10 I'm mean, we're talking about raising that as an
11 indicator for -- for Grayling and Northern Pike. Why do
12 we assume that we can extrapolate across species with
13 confidence on that?

14 MR. BRUCE HALBERT: Bruce Halbert. In
15 general, you're correct, and most of the test work is
16 done using Rainbow Trout though there are -- there are --
17 or there is an increasing inventory, if you will, of
18 toxicity information in other species as well. We go to
19 a reference -- or a referee database, such as the US EPA
20 ECOTOX database for a -- a lot of the information we
21 draw.

22 Where we have a particular interest in a
23 specific species, we will look to see if there is data on
24 that species that we can -- that we can use in place of
25 using Rainbow Trout.

1 But in a more general sense, since we're
2 often dealing with a variety of species from a -- from an
3 eco risk point of view, focus on a particular one (1), we
4 typically rely on tox data that's based on Rainbow Trout.

5 THE FACILITATOR EHRLICH: Okay. Thank
6 you for that. I'm going to hop around to a few of the
7 questions that I didn't want to interject before, because
8 I didn't want to break up the flow of the discussion, but
9 there are a couple of things that are -- oh, Morag
10 McPherson of DFO would like to make a comment regarding
11 the last line of questions.

12 MS. MORAG MCPHERSON: Yeah. Thank you.
13 Morag McPherson with Fisheries. Just wanted to add to
14 this, just as a piece of information, that it's an
15 interesting discussion you're having in terms of toxicity
16 reference values and what we use and how that applies to
17 northern fish species.

18 I know quite a few people are aware of
19 this, and I've made the project team aware as well, that
20 there is some work underway to look at doing toxicity
21 work on northern fish species in colder-water scenarios
22 than what is currently being done and used and relied on
23 in some of these ecological risk assessments. So there
24 is some toxicity work happening to try to have some more
25 cold species-specific toxicity reference values to use.

1 Some of this information we're hoping will
2 be available this fiscal year, we're not sure, but when
3 that information is available, it's something that can be
4 shared -- will be shared with the Giant Mine team, and
5 can be shared with the Review Board as well.

6 THE FACILITATOR EHRLICH: Thanks for
7 that, Morag. And, you know, I mean, one (1) of the
8 reasons why I'm asking for a little bit more detail on
9 this is partly because the Board is required to consider
10 the -- explicitly required to consider the potential
11 impacts on traditional lifestyle and traditional
12 subsistence. And in the DAR, in Table 8.7.2, the Giant
13 team pointed that of -- of particular concern to the
14 public are the effects of arsenic on fish habitat and
15 traditional foods.

16 And so, you know, it's -- I -- I'm not
17 asking this because this is necessarily one (1) of the
18 biggest issues in the assessment, but because the Review
19 Board's mandate requires due diligence with respect to
20 this, and, as has been pointed out yesterday, it's not
21 just the actuality; the perception as well carries
22 certain impacts, too. And so, you know, as you guys have
23 to deal with, so -- so do we.

24 Next question that I have had to do with -
25 - we were talking about mercury a moment ago. We talked

1 about arsenic from flooded mine workings. I -- I do
2 recall in the DAR being struck by the -- the sheer length
3 of underground mine workings, the surprising amount of
4 mine workings underground that are not in chambers and
5 are not in stopes. I don't remember the measure in
6 kilometres; one (1) of you might. I remember it was --
7 it was -- I think it was 20 kilometres or something, like
8 -- it was a high number.

9 And -- and the -- the Giant team
10 identified that there were quite a number of contaminants
11 in those things, including a fair bit of arsenic,
12 including tailings that have been used as backfill and
13 other stuff.

14 What about mercury from flooded mine
15 workings? Have you looked at that?

16 MR. BRUCE HALBERT: Bruce Halbert, for
17 the record again. That was a question in one (1) of the
18 IRs, I'm not sure which one it was, but we did -- we did
19 respond to that and -- and looked at mercury level
20 measurements in not just the minewaters, but in drainage
21 from the site of various sources. And in practically all
22 cases, the mercury level measurements are less than
23 detection limits. I think there was only one (1) area
24 where there was defined to be mercury levels that were
25 detectable, and that was in the foreshore tailings beach.

1 THE FACILITATOR EHRLICH: The IR that it
2 was, was I -- Review Board IR Number 25, and the response
3 was that:

4 "The Giant Mine site is not considered
5 to be a significant source of mercury.
6 There were low concentrations in the
7 soils and in the downstream receiving
8 environments."

9 But because the response didn't describe
10 what was going on in the underground workings, I just
11 wanted to be thorough and make sure. Okay. But I've --
12 I've heard your answer, and I -- it sounds like a good
13 one to me.

14 With respect to the diffuser -- sorry, I'm
15 shuffling, as you can see, through a fair amount of paper
16 while trying to facilitate the session at the same time,
17 so I'll ask you to bear with me for a moment.

18 Regarding potential for effluent
19 accumulation around the diffuser, and, you know, this
20 might just require some clarifying on some stuff that was
21 discussed yesterday as well, Review Board IR Number 24
22 touched on this: What is the potential for effluent
23 accumulation in the immediate -- sorry, for arsenic
24 accumulation in the immediate vicinity around the
25 diffuser?

1 We know you've got your mixing zone. I
2 imagine we're talking about largely soluble stuff, but I
3 know in some cases concentrations will decrease, you
4 know, as a reverse exponential factor.

5 What's going to happen on -- on -- in the
6 sediment in the immediate vicinity of that diffuser?
7 We'll start off with the short-term, I guess, and then my
8 -- my question wants to explore further into the long-
9 term.

10

11 (BRIEF PAUSE)

12

13 MR. BRUCE HALBERT: Bruce Halbert. I'll
14 give you kind of a two (2) part answer here. The arsenic
15 level present in sediment, in part, if it's -- if it's --
16 if the source is coming from the water column, and not
17 from tailings deposition historically, there is an
18 equilibrium that's set up between concentrations in the
19 water column and concentrations that accumulated in
20 sediments both from removal unsetting solids and by
21 diffusive exchange of -- between the pour water in the
22 sediments and the water column. That we do account for
23 in our modelling.

24

25 My expectation is that within the
immediate area of the diffuser, and I mean tight, there

1 may be some accumulation beyond what's there already.

2 My expectation -- beyond that though
3 there won't be, because we're into an area that does have
4 some arsenic present in sediments already. Our overall
5 predictions in the -- in Back Bay, Yellowknife Bay, and
6 down through the whole system is a declining
7 concentration over time as we've -- as the water column
8 has been im -- improving as well over time.

9 So does that answer your question?

10 THE FACILITATOR EHRLICH: Partly.
11 Where's it going over time? I mean, where downstream do
12 you -- you think it's winding up?

13 MR. BRUCE HALBERT: Bruce Halbert again.
14 Well, as we move away from the diffuser the concentration
15 of arsenic in the water column continues to dilute, if
16 you will, and become less and less an approach background
17 within Great -- Great Slave Lake.

18 So, for example, in the -- in the South
19 Arm of Yellowknife Bay we're predicting the -- the
20 arsenic concentration in the order of -- of point six
21 (.6), in the shorter term, if you will, the next hundred
22 (100) years. Micrograms per litre, sorry.

23 In Yellowknife Bay coming -- or
24 Yellowknife River coming in, by comparison is at .3
25 micrograms per litre. So given a -- the bigger water

1 body picture you expect the concentration in Great Slave
2 Lake to be around point three (.3) without any influence
3 of anyth -- anything else coming in.

4 So as far as exchange where the sediments
5 is concerned, at those kind of low concentrations it's
6 very low -- low levels that would be reflected in the
7 sediments.

8 THE FACILITATOR EHRLICH: Thank you.
9 And, you know, with the kinds of terms that most projects
10 we assess involve, the -- the life cycle of the project,
11 I -- I -- your -- your response in the IR that there
12 would be little or no settling in the vicinity of the
13 diffuser would work fine, and I understand that.

14 But because this is -- project is expected
15 to be released in water that does contain some arsenic,
16 not just for a short time, not just for, you know, fifty
17 (50) years or five hundred (500), but for five thousand
18 (5,000) or fifty thousand (50,000), even if there is a
19 little progressive settling, I imagine that level's going
20 to go up, and up, and up, because you want to do it
21 forever.

22 Is that -- in -- in the -- in the vicinity
23 of the diffuser. Is that right? Or is the -- is the
24 improving quality of the water -- is the improving
25 quality of the water that -- that's happening as -- as

1 contaminants on the site taper off over time, and you've
2 -- you said before, it would be many years, but you said
3 within twenty-five (25) year -- was it ten (10) to twenty
4 (20) years you're expecting some stabilization in the
5 amount of contaminants coming out.

6 Is that enough to make sure that there is
7 no long-term accumulation of arsenic in the vicinity of
8 the diffuser?

9

10 (BRIEF PAUSE)

11

12 MR. BRUCE HALBERT: Bruce Halbert, for
13 the record. I think there's several points I better make
14 here to try to clarify this. The discussion yesterday,
15 talking about stabilization, or conditions stabilizing in
16 twenty (20) -- ten (10) to twenty (20) years was specific
17 to levels within the mine -- mine workings themselves.
18 Okay.

19 As far as the effluent quality is
20 concerned, our ex -- expectation would be we'll achieve,
21 you know, on target, average .2 micrograms per -- or
22 milligrams per litre in the effluent, regardless of
23 what's happening in the mine. Okay. So that -- they're
24 not directly related. I mean, there's no carryover
25 influence here.

1 The second point I think I should make is
2 that in the area wherever the outfall is going, the
3 sediments already contain arsenic that's above baseline,
4 if you will. Okay. So we already have a reflection in
5 that system of an historic input.

6 Those sediments are acting today as a
7 source of arsenic feedback to the water column. That's
8 occurring regardless. So given that -- that condition
9 where we are today, in those sediments, and the levels
10 that we're talking about in the effluent discharge going
11 in, we -- my expectation is, and that's what our
12 modelling results suggest, is that there is no accu --
13 net accumulation occurring as a result of the effluent.
14 In fact, conditions -- sediment concentrations will
15 continue to improve.

16 The third point I should make is that in
17 the big picture there is -- and this takes -- does take
18 decades, but there is a progressive accumulation of new
19 sediment building up on top, and burial of sediments out
20 at the bottom. And core sampling within Yellowknife Bay
21 has -- demonstrates that. You have a blip of higher
22 concentration of arsenic near the surface, dropping off,
23 and then you come back in -- in higher concentrations
24 down typically, I'm going to say between 6 and 10
25 centimetres below the surface, which really reflects that

1 historic input. So the -- they're progressively being
2 buried. So while there will be some let's say transport
3 downstream and conditions will stabilize, at some point
4 in time it just doesn't continue to increase.

5 And at the concentrations we're talking
6 about of arsenic in the water column, we're not talking
7 about any big increase in -- in arsenic concentrations in
8 sediments.

9 THE FACILITATOR EHRLICH: So then if I
10 understand you correctly, you're saying that over the
11 very long time, not just decades but over the millennia
12 for which the project is proposed, that the natural
13 buildup of sediment is gonna wind up resulting in no long
14 term net increase compared to -- tell me if I'm right on
15 this part -- not just the point that they're at today but
16 the trend that the sediment is -- is currently following.

17 You're saying that the -- the ars --
18 arsenic in the sediment is -- is being released so
19 there's a trend of gradual improvement going on with the
20 sediment now, and I think I heard you say the project
21 will not make it worse than it is today.

22 But the question that I'm implying here
23 is, Is it also going to allow that trend to continue in
24 that area, and the answer that I think I heard was that
25 over the millennia as sediment continues to build out via

1 natural processes there won't be more arsenic immediately
2 surrounding the diffuser because of this project.

3 MR. BRUCE HALBERT: Bruce Halbert again.
4 Yes, Alan, you're -- I think you've interpreted what I
5 said correctly.

6 THE FACILITATOR EHRLICH: Okay. I'm --
7 I'm running to keep up. I asked an innocent question
8 about arsenic and some how we got into paleolimnology,
9 and so that's at my -- edge of my comfort zone, I assure
10 you.

11 Okay. But, you know what, we're -- we're
12 covering a lot of ground and we're very near tying up the
13 -- the water section.

14 I'm gonna ask if the Review Board's expert
15 Dave Tyson has any questions he'd like to ask the
16 developer, or for that matter since DFO is here. The
17 reason why I'm saying the developer or -- or DFO is
18 because it's an unusual situation that DFO, in providing
19 objective scientific advice, has also been influential in
20 the design of Baker Creek.

21 The design of Baker Creek has an influence
22 on the -- the project as proposed. But I recognize that
23 DFO is not here as part of the Giant team, I still think
24 they may have some -- some useful information.

25 So, Dave, what is your question, and who'd

1 you like to direct it to?

2 MR. DAVE TYSON: Excuse me. Dave Tyson
3 for the Review Board. I'd like to direct this towards
4 the Giant Mine team.

5 You know, we've been talking a lot about,
6 you know, the details in Baker Creek; toxicity, potential
7 impacts, potential remediation. But until about twenty-
8 four (24) hours ago really when the information was
9 presented about alternatives for diverting Baker Creek,
10 it wasn't really considered. And I was wondering if the
11 team could explain why they did not investigate the
12 diversion of Baker Creek as an alternative to maintaining
13 flow down Baker Creek?

14

15 (BRIEF PAUSE)

16

17 MR. ADRIAN PARADIS: Excuse us --

18 THE FACILITATOR EHRLICH: You know it's a
19 good question when the Giant team needs a huddle.

20

21 (BRIEF PAUSE)

22

23 THE FACILITATOR EHRLICH: This is an
24 agenda update in response to some questions I'm hearing
25 around the back there. My -- you know, because we're

1 determined to try and get through this agenda, and I've
2 said that we're not going to do -- the focus is going to
3 be on the surface remediation after the break, we're
4 delaying the break. Anyone who wants to sneak off and
5 use the washroom is encouraged to do it now.

6 Remember, anything you've missed will be
7 available on the transcript tomorrow morning on the Web.
8 And, Dave, your answer is going to be coming up next. So
9 you're -- you ask a question, you're pretty much stuck
10 with staying here, right?

11 Okay, you know what? We're going to take
12 a five (5) minute break now. You know what? Let's make
13 a -- we'll make a ten (10) minute break now, but the --
14 the rest of the questions here are going to be pretty
15 short, and then we're going to go straight to surface
16 remediation.

17 So let's do our ten (10) minute break now,
18 and we're coming back at ten (10) minutes to 11:00.

19
20 --- Upon recessing at 10:40 a.m.

21 --- Upon resuming at 10:50 a.m.

22

23 THE FACILITATOR EHRLICH: Okay. I'm
24 going to ask the Giant team to respond to Dave Tyson's
25 question, and then we have two (2) questions by Dave

1 Ramsey. And the response is going to have to be quick,
2 because we've got the people we need for water on the
3 Giant team disappearing at 11 o'clock. Remember, they're
4 carried over from yesterday, and they're not able or
5 intending to stay all day today.

6 So, Giant team, have you had a chance to
7 consider?

8 MR. DARYL HOCKLEY: Daryl Hockley. We
9 did look at the opportunities for a complete diversion of
10 -- of Baker Creek, and we -- we wondered if we had
11 reported on that, but we did actually find a paragraph in
12 the DAR that -- that explains that that had been looked
13 at.

14 I -- I guess the -- the change is -- is
15 the -- the reconsideration of the risk profile of Baker
16 Creek, and that -- that's caused a renewed interest in --
17 in that -- in that topic and in other mitigations that --
18 that might be applied, so.

19 THE FACILITATOR EHRLICH: Thanks for
20 that. Doug Ramsey, are you in the room? I don't see
21 you.

22

23

(BRIEF PAUSE)

24

25 THE FACILITATOR EHRLICH: Morag McPherson

1 of Department of Fisheries and Oceans.

2 MS. MORAG MCPHERSON: Morag McPherson
3 from Fisheries and Oceans. Just wanting -- wondering,
4 was that the -- the total response from the Giant Mine
5 team on that?

6 If I may, given that there were some
7 comments made at the beginning in terms of DFO's role in
8 this, I think it's something that's important to clarify,
9 because I'm not sure why, or it seems that there's a
10 misinterpretation of what our priorities are and what our
11 role has been in this process.

12 There's the Federal Contaminated Sites
13 Action Plan Program that has money given to federal
14 departments to assist in doing site assessments and risk
15 assessments on sites in order to determine what the
16 Remediation Plan is.

17 So it's more of a formalized process for
18 DFO to become involved in contaminated sites management.
19 And that is a separate role that is a more formalized
20 approach to engage us in site assessment, risk
21 assessment, remedial options analysis.

22 In terms of -- this project has been put
23 forward as a remediation project now, so DFO's role is as
24 it is with any other proposed development, what are the
25 impacts on fish and fish habitat.

1 The -- our involvement upfront in fix-up
2 was more of a formalized way of us getting engaged. But
3 if proponents come to us early in a process we deal with
4 them the very same as we do on this process.

5 The only difference is is that there was
6 money put forward as a formalized approach for DFO to
7 ensure we're engaged and have the capacity --

8 THE FACILITATOR EHRLICH: And, Morag, I -
9 - I appreciate this.

10 MS. MORAG MCPHERSON: Yes.

11 THE FACILITATOR EHRLICH: Hold onto that
12 for another six (6) --

13 MS. MORAG MCPHERSON: Okay.

14 THE FACILITATOR EHRLICH: -- minutes.

15 MS. MORAG MCPHERSON: Okay.

16 THE FACILITATOR EHRLICH: Okay. Because
17 the experts we need to respond --

18 MS. MORAG MCPHERSON: Okay.

19 THE FACILITATOR EHRLICH: -- to two (2)
20 questions we have will not be here in six (6) minutes.

21 MS. MORAG MCPHERSON: Okay. Thank you.

22 THE FACILITATOR EHRLICH: And we'll talk
23 more about that soon. It is helpful.

24 MS. MORAG MCPHERSON: Yeah. Yeah. No, I
25 forgot about the time restrictions. Thank you.

1 THE FACILITATOR EHRLICH: Doug Ramsey,
2 two (2) questions and due to time constraints everything
3 has to be pretty succinct.

4 MR. DOUG RAMSEY: Doug Ramsey. I've got
5 two (2) questions. Hopefully they can be answered very
6 quickly. The first one (1) is a continuation of the
7 conversation surrounding the diffuser and arsenic loading
8 into Yellowknife Bay.

9 My recollection from the presentation
10 yesterday was that overall there's an expected 24 percent
11 reduction in arsenic loading to Yellowknife Bay from
12 Baker Creek as a result of the remediation project.

13 And based on that, my expectation would be
14 that overall that would also lead ultimately to a
15 reduction in arsenic concentration in -- in Yellowknife
16 Bay. The diff -- the change though is the point at which
17 the arsenic is introduced to Yellowknife Bay, move --
18 moving some it from the mouth -- from the discharge of
19 Baker Creek out to the point of the diffuser.

20 And at the point of the diffuser we're
21 looking at a structure that, based on the design
22 information presented, is approximately 81 metres long
23 with the mixing zone extending 15 metres out from all
24 sides, which takes me to a mixing zone that's
25 approximately 111 metres long by approximately 30 metres

1 wide, which gives us an area of approximately 3,300
2 square metres of lake bottom that would sit underneath
3 your mixing zone.

4 And my question is -- first, is my
5 assessment of the expected reduction in arsenic
6 concentration in Yellowknife Bay based on the reduction
7 in loading correct?

8 THE FACILITATOR EHRLICH: If this can be
9 answered promptly by the Giant Team, great. If not, then
10 you can take it as a written undertaking.

11 MR. BRUCE HALBERT: I followed -- sorry,
12 Bruce Halbert. I followed your discussion up -- up to
13 your last question. Could you just restate --

14 MR. DOUG RAMSEY: I'm just -- I'm -- and
15 I'm seeking -- Doug Ramsey. I'm seeking confirmation
16 that based on the expected reduction in arsenic loading
17 to Yellowknife Bay, that we should see a proportionate
18 reduction in arsenic concentration in Yellowknife Bay
19 once equilibrium is established?

20 MR. BRUCE HALBERT: Bruce Halbert for the
21 record. Yes, and we do predict that, and that is
22 actually presented within supporting document N-1, where
23 you will see that.

24 The -- the only point I'd make here is
25 that the 24 percent reduction we're talking about from

1 external loads to Ye -- to Yellowknife Bay does not in --
2 take into account the fact that there is an internal load
3 also within the Bay itself as a result of the sediments
4 that are there.

5 So the recovery of the system is dependent
6 upon the complete picture, and that's part of what we
7 assimilated.

8 THE FACILITATOR EHRLICH: Okay. Doug, do
9 you have a second question?

10 MR. DOUG RAMSEY: The second question is,
11 and that relates to the diversion of Baker Creek as a --
12 as a contingency measure. It was evident from the
13 answers that were provided yesterday that some of the
14 other potential effects or benefits of the diversion
15 remain to be examined, including the potential for a
16 further reduction in arsenic load into Yellowknife Bay as
17 a result of the diversion of Baker Creek. I -- we were
18 told yesterday that that hasn't been looked at, so you
19 can't say one (1) way or the other.

20 Would the Giant team be prepared to commit
21 to explicitly examining that as part of examining the
22 advantages and disadvantages of the Baker Creek
23 diversion?

24 THE FACILITATOR EHRLICH: And, you know,
25 again, because it's a perpetuity project, I -- I

1 understand this is a contingency, but if you're going to
2 be having this operate for millennia, there is a chance
3 you will need to use contingencies, it's worth
4 understanding them well.

5 Is that something the Giant Mine team can
6 commit to produce by November 14th?

7 MR. BRUCE HALBERT: I'm going -- Bruce
8 Halbert. I'm going to give you my thoughts, and they're
9 not necessarily what the team's thoughts are, so I'll
10 qualify it.

11 As I indicated yesterday, diverting this -
12 - Baker Creek does not necessarily remove the loads that
13 are going into Yellowknife Bay. We took a very
14 conservative approach to assessing what the implications
15 were to Back Bay, Yellowknife Bay, as I indicated in a --
16 in an earlier response. I would not propose to undertake
17 any further analysis in that regard. I would simply take
18 the same approach: whatever loads we've assimilate --
19 assumed are coming off the site for the -- for the
20 current assessment, I would assume are gonna be there for
21 the next assessment.

22 I -- I -- this gets into a question of
23 trying to establish now what's gonna be the incremental
24 effect on -- on the loadings from that -- that system
25 from sediment removal, for example. Our analysis is not

1 that refined to be able to say element A, B, and C all
2 contribute, you know, X, Y, and Z to the total.

3 So that's my -- my thought on it.

4 THE FACILITATOR EHRLICH: Now, you're
5 saying it's -- it's yours, but -- and you're speaking on
6 behalf of the Giant team, but that might not be the view
7 of the Giant team. I want to be sure that the record's
8 pretty clear on: Is that the Giant team's response to
9 that question? Are you guys all together on that?

10

11 (BRIEF PAUSE)

12

13 MS. LISA DYER: Lisa Dyer, for the
14 record. We are more than happy to share information as
15 we advance in our thinking. At this time, we would not
16 be able to provide that kind of consideration for
17 November 14th. This is a contingency and we are very
18 early on in our considerations of this. We -- we just
19 don't have this background information to provide, but we
20 are more than willing, as are -- we advance on
21 considering this contingency, of providing more
22 information, but it's -- it's just not realistic at this
23 time. And -- and we really initially do not feel that
24 this will change the loading to the environment.

25

THE FACILITATOR EHRLICH: And I'm going

1 to ask -- Doug Ramsey, you've heard the team's response,
2 as well as Bruce Halbert's response, does that satisfy
3 your requirements? Can we get away without an
4 undertaking, provided the Giant team keep us posted as
5 their thinking develop?

6 MR. DOUG RAMSEY: Doug Ramsey. As long
7 as they do provide that information as their -- their
8 thinking on the diversion develops. We do understand
9 that the consideration of the diversion is in a very
10 early stage. I would only add that, as part of that, it
11 may -- is it -- would it be possible to look at the
12 opportunities for additional ar -- arsenic management
13 that may result as -- as a result of the diversion of
14 Baker Creek?

15 THE FACILITATOR EHRLICH: Thank you. In
16 that case, I'm not going to call this an undertaking.
17 Giant team has said that, as its thinking evolves with
18 respect to the -- the potential for an alternate route
19 for Baker Creek, through the north diversion I guess it's
20 being called, it will keep us posted, and I -- so long as
21 you're willing to also, as you keep us posted, let us
22 know if there are implications for arsenic loading of --
23 of Yellowknife Bay, then I think this is satisfied
24 without giving you guys an additional undertaking. And,
25 again, that, to me, is a sign that the technical session

1 is working, so I'm happy about that.

2 Do you have any other questions -- this is
3 the last kick at the can -- for the Giant waters team?

4 MS. LISA DYER: I -- just on that note,
5 if we can make this the last, because I see people
6 beginning to twitch. They -- they do want to get home to
7 their families, and they're a little bit worried about
8 missing their planes right now.

9 So, please, if you have questions, let us
10 know what topic area they are so that we can release some
11 people so that they can make their flights. There's
12 nothing worse than missing your flight when you really
13 want to go home.

14 THE FACILITATOR EHRLICH: Lisa, in my
15 view, and I'll invoke the awesome power of facilitator
16 here, everyone who needed to ask questions on this has
17 had adequate opportunity to ask questions on it. Please
18 release your devoted team so they can get back to where
19 they need to get back to in time.

20 Thank you all very much for bearing with
21 us for a long time, for truly constructive discussion.
22 You know, I think we covered a lot of ground and people
23 have a more clear idea of what you're proposing. There's
24 some useful answers that came out. I heard quite a -- a
25 valuable commitment come out yesterday as well. Go

1 safely, and let's get on with the presentation having to
2 do with surface remediation as soon as the Giant team is
3 ready.

4 As some members of the Giant team leave,
5 I'm going to ask DFO to please continue its comments that
6 it kindly allowed me to cut off about ten (10) minutes
7 ago. Go ahead, Morag McPherson.

8 MS. MORAG MCPHERSON: Thank you very
9 much. Morag McPherson, Fisheries and Oceans. I didn't
10 have any further questions for the Giant Mine technical
11 team, but I wanted to follow up on some of the comments
12 that we heard from the Board in terms of Baker Creek and
13 -- and how we're considering habitat in the creek, just
14 to clarify, because I think we've been hearing some of
15 these comments, and I think it's important we use these
16 forums to have an opportunity to clarify any
17 misunderstandings that might be there.

18 The consideration of restoration of Baker
19 Creek within the larger Giant Mine remediation hasn't
20 been done in isolation; it's not just focussed on
21 habitat. There's -- a restoration concepts paper was put
22 together in 2005, it's supporting toc -- document G-2.
23 And the -- the idea of trying to have some sort of
24 rehabilitation of Baker Creek, there's -- it's recognized
25 that there's several elements and factors within the

1 remediation on the site that need to be dealt with first
2 before it's feasible to really undertake any type of
3 restoration of the habitat, and it outlines what those
4 elements are: stability of the site in the mine; water
5 quality and sediment quality, which is human health and
6 ecological risk.

7 We recognize that those are the
8 priorities, and that where those are found to be stable
9 and the risk is acceptable, that then the opportunity to
10 provide channel restoration, habitat restoration, fish
11 access, overlay that. It's not on top as a priority.

12 So I just want to make that clear, that,
13 in our discussions overall in terms of what's happening
14 on the site, that the priority is the stability of the
15 site, reducing environmental and ecological risks. We
16 don't want to be creating habitat in an area that will
17 pose a long-term risk, and that's why we're working with
18 them on these studies, and we're recognizing that these
19 stability issues need to be dealt with.

20 And, regardless of what comes out at the
21 end, it's likely that a DFO authorization is going to be
22 required. So we're not trumping any of these other
23 things with habitat. It's -- we see it all as part of
24 the picture, and we recognize that these other elements
25 need to be in place before any type of habitat

1 considerations are even feasible.

2 So -- so that's how we have come into
3 this, and it's just ensuring that we have the appropriate
4 information on both sides, on all sides, to make a
5 balanced decision in this regard. So just -- just so
6 it's clear that we're not -- we're not saying that our
7 position and our role is the priority. We -- we know
8 what the priorities are at site, and we know what the
9 risk is, and the habitat side of that is just -- is -- is
10 supposed to be complementary to the long-term objectives
11 of the site, not driving what's happening onsite.

12 So that -- I think that's sort of what we
13 had to say there, is that it's -- it's in line with --
14 you know, it's complementary, and -- and it's our
15 understanding that it's still in line with the overall
16 objectives and complementary. Thank you.

17 THE FACILITATOR EHRLICH: Morag, I think
18 that's very helpful.

19 Everyone who has to leave to catch a
20 plane, please leave to catch a plane, because there's no
21 questions that need answering here, so away with you.

22 I -- I -- yeah, that -- that big picture
23 view is -- is useful, as was what I heard before, where
24 you were clarifying a bit of DFO's role. How you were
25 helping with design of an aspect of this but you're

1 participating in the environmental assessment as an
2 expert department providing an objective review as far as
3 your mandate is concerned.

4 And I'm guessing that we can expect from
5 DFO, at the same time we get it from other parties, a
6 technical report providing your -- your views on the
7 potential impacts of the proposed project. In other
8 words, remediation project.

9 That's not a question. Just one (1)
10 moment please.

11

12 (BRIEF PAUSE)

13

14 THE FACILITATOR EHRLICH: Okay. I think
15 we are ready to roll onto the surface issues. We've got
16 just about an hour until lunchtime. I would really like
17 it if you can have -- make your presentation finish at
18 five (5) minutes to noon, because that five (5) minutes
19 helps us start up again on time.

20 So you're given an hour, and it's actually
21 -- it's actually fifty (50) minutes. If you can't, you
22 can't, but please do your very best. We're going to back
23 this table out of here.

24 Anyone who wants to see better, just like
25 yesterday, should go over to the good seats, and leave

1 this table. Thanks. Over to the Giant team.

2

3

(BRIEF PAUSE)

4

5 PRESENTATION BY THE DEVELOPER RE SURFACE REMEDIATION:

6 MR. MARK CRONK: Mark Cronk. I guess
7 we'll get started, Alan, if that's okay with you.

8 THE FACILITATOR EHRLICH: Please do.

9 MR. MARK CRONK: I'd like to introduce
10 generally the surface team. The presentation you're
11 going to see this morning covers five (5) topics.

12 It will start with the open pits, which
13 will be done by Mr. John Hull. Followed by contaminated
14 soils, which will be presented by Art Cole. Followed by
15 that we'll go back to John Hull who will discuss the
16 tailings aspect of the project.

17 We'll go to the surface waste, which is
18 the demolition of buildings and structures, landfills,
19 and associated structures, by Mr. Gord Woollett. And
20 we'll return to Bruce Halbert who will discuss air
21 quality aspects at the end of the presentation.

22 And so with that, I'll turn it over to
23 John Hull for the open pits.

24 MR. JOHN HULL: Thank you. John Hull.
25 This presentation is to discuss the open pits, and the

1 closure plans for the pits.

2 I'll just show briefly the -- the overall
3 mine site, and the -- the eight (8) pits that we're going
4 to talk -- open pits we're going to talk about. As
5 everybody appreciates, this is a fair -- fairly large
6 site, and extends over a long distance along the Ingraham
7 Trail.

8 What we want to discuss is the general
9 design philosophy for the pit closure, just the general
10 layout of the site, and the pit locations, identify the
11 existing hazards, some recent items at B1 Pit, and then a
12 short summary.

13 Starting off with the gen -- the general
14 design philosophy, and what was the background, or the
15 underlying theme for the -- for the closure. Essentially
16 what the existing open pits represent a number of
17 hazards, and the -- the considerations are to stabilize
18 them in terms of public health and safety, the
19 environment, and sen -- sensitive infrastructure.

20 One (1) of the main drivers is that for
21 the open pits, there is no intended or future
22 recreational use, or public access to the open pits which
23 is consistent with practices for open pit closures in
24 Canada.

25 The criteria that was also used is

1 consistent with the Northwest Territories Mine Health and
2 Safety Act, and Regulations.

3 What we looked at is three (3) general
4 areas based on -- and that was used to define the effort
5 and the criteria that would be identified for the various
6 open pits along -- on the property.

7 One (1) of the things that we were
8 concerned with was local rock falls, the pit floor
9 stability because of underground operations under some of
10 the pits, the pit walls, and areas that there would be no
11 impact to public safety, infrastructure, or the arsenic
12 chambers. This would typically be Pit A1.

13 The next area was where there may be a
14 impact to public safety or the sensitive in --
15 infrastructure due to the pit walls, rock falls, and
16 underground. Again, this would be in the area of A2.

17 And finally, where there is -- the open
18 pits were close to and would -- failure or any movement
19 of the slopes or the pit floors would cause damage or
20 issues with the arsenic chambers and stopes, and this
21 would be typified by Pit B1.

22 And I'm just going through the various
23 open pits and just in general -- this identifies the
24 eight (8) pits on the site: Pits A1, A2, B1, B2, C1,
25 which we will discuss in some detail. I also note that

1 there's B3, Before, and the Brock Pit. We're not going
2 to discuss those in any detail in that those pits are
3 less than 10 metres deep, and there's no stability issues
4 with the -- the pit slopes or underground in those areas.

5 Flagging the key pits that we will now
6 talk about, as I said, A1, A2, C1, B1, and B2. What we
7 identified in terms of the existing hazards was: Were
8 there any pit slopes instabilities around the pits
9 resulting from, or as a consequence of, structure, that
10 would be faults or discontinuities; the location of the -
11 - any openings that would be -- to underground that would
12 have to be backfilled, and stopes under the pits; and
13 were there any subsidence or any movements of the pit
14 crests around the key pits.

15 To follow up from the work that was done
16 in the -- the DAR, we've carried out detailed inspections
17 in 2010 and 2011. In general, the results and our
18 observations are consistent with what was identified
19 previously, and the recommendations are consistent with
20 what was presented in the DAR. What we have done is
21 taking -- taken the new data and upgraded some of the
22 recommendations and the comments.

23 I now want to go through the key pits and
24 identify what we've identified, and then the -- a quick
25 overview of closure options and proposals.

1 At Pit A1, showing Baker Creek along the
2 east side there, just off the bottom of the -- the
3 figure, what you can identify as the purple is the extent
4 of the underground workings. Some of the workings have
5 been backfilled as part of the mining operation, some
6 haven't been, and we haven't fully identified which of
7 the openings and stopes were backfilled fully.

8 Along the north and northwest side,
9 there's a drainage ditch which then runs to Baker Creek.
10 At the moment, that is diverted into the pit due to
11 sediment issues and T -- total suspended solids. We also
12 note that Pit A -- the portal in Pit A1 is still open,
13 and that would be closed as part of the closure options.

14 And the two (2) areas on this area on the
15 northwest and this area on the northeast are overburdened
16 from mine waste from stripping the other pits, and that
17 is slowly creeping into the pits. That will be
18 stabilized as part of the closure planning.

19 Again, here is the picture of the same
20 pit, showing the underground openings and stopes, which
21 would be backfilled as appropriate. Fencing and berming
22 along the west side, and improvement of the ditching
23 along the north and west side.

24 And, as Nathan mentioned before, there's
25 Baker Creek, and there's a reasonably large berm between

1 Baker Creek and the pit, which would minimize any
2 potential and any risk for Baker Creek heading into the
3 A1 Pit.

4 Moving to A2. Again, showing the
5 underground workings in the purple. The portal in this
6 pit, a two (2) portal. There's a series of Crown pillars
7 which need to be investigated through this area. That
8 includes the sequence of two-o-five (205) and two-o-one
9 (201) on this lower area.

10 There's also the DWC stope and portal in
11 this area. And at the moment, we've identified some
12 local spalling of the east pit wall, and there's some
13 spalling off of the west pit wall in this area. That's
14 local bench fall -- failures, which are typical of mines
15 and open pits.

16 THE FACILITATOR EHRlich: Excuse me, Mr.
17 Hull, just for a second. Could you -- we've got a number
18 of people in this room, a number of different
19 backgrounds, could you define "spalling," please?

20 MR. JOHN HULL: That would be a local
21 slab filling of a piece -- a rock off the pit wall.
22 That's -- that is typically identified for a rock size
23 that might be the size of a desk, but no bigger than the
24 -- one of your small subcompact cars.

25 That -- the proposed plan for the A2 Pit

1 includes sealing the A2 portal in the lower part here,
2 backfilling on the bottom of the pit to stabilize and
3 buttress the east slope, which is where the spalling and
4 the small rock falls were occurring, also in the area of
5 the DWC portal, and some minor instabilities of the
6 slopes in that area. Baker Creek runs along the north
7 side, and that was addressed in Nathan's discussion
8 yesterday.

9 Now moving to B1 Pit. This is more
10 important because of the B208 arsenic stope, and the
11 B212, 213, 214 stope on the north side.

12 There has been some -- on the west side
13 there's a complex of about three (3) stopes that were
14 mined out and have not been backfilled that would be
15 backfilled as part of stabilization so that the B2 -- B1
16 Pit can be backfilled.

17 There's also a -- some movement -- some
18 minor movement of the east slope and that's being
19 monitored. The monitoring started last year. At the
20 moment it's stable, but would -- monitoring would
21 continue.

22 There's also a sinkhole, that was
23 mentioned earlier, just in this area which I'll talk
24 about briefly on the next slide. As I mentioned, there's
25 a -- some minor slope instability in this east area.

1 There's some overburden that's slowly creeping towards
2 the pit. As I say, we've monitored it. Most of the
3 movement was in the spring; it's now stopped. Monitoring
4 will continue and be upgraded.

5 There's also monitoring over the 212, 13,
6 14 complex. One (1) of the flags in the DAR and in the
7 re -- remedial action plan for them -- the site was a
8 concern with the crown pillar in this area, and this
9 monitoring is to confirm if anything is moving so that if
10 something is noticed, the mine would be able to react
11 appropriately.

12 And then I identified the stopes that are
13 on the west side, which would be backfilled as part of
14 this closure for the B1 pit. And there is Baker Creek
15 just along the corner, which is at the top left.

16
17 (BRIEF PAUSE)

18
19 MR. JOHN HULL: As I noted, this spring
20 there was a sinkhole that developed on the south side of
21 B1 Pit. It was identified from discussion with miners
22 who've worked on the property for some time that there
23 was a small extension, or slot cut, on the south side of
24 the B1 Pit. It was backfilled after the mining was
25 complete. And what's happening is the -- the slot cut

1 was connected to the underground. There has been some
2 seepage from Baker Creek, which is off to the right.
3 That seepage has moved material to the underground, and
4 subsequently we have a sinkhole.

5 Inspection of the pit slope just to the
6 left for a -- the B2 -- B1 Pit indicates there's been no
7 movement of that pit slope so that the material is going
8 directly to the underground.

9 You can see from the three (3) photos,
10 there's a slight increase in the size of the hole -- the
11 sinkhole. An inspection of the sinkhole the other day
12 indicates that it is not much bigger than the July 18th
13 figure.

14

15 (BRIEF PAUSE)

16

17 MR. JOHN HULL: In the remediation plan
18 for the B1 Pit, because of the arsenic stopes 208, 214,
19 213, 212, B1 Pit will be backfilled.

20 The backfill would be extended to a height
21 at least 2 metres above Baker Creek so that Baker Creek
22 would not get back into the B1 Pit area.

23 That would prepare the pad -- pad for the
24 freeze system. And, as identified on Monday, the freeze
25 pipes would be in this area, in this area, and then

1 around those arsenic chambers. I don't have -- I haven't
2 placed the locations on here, just to avoid confusion
3 with the -- this slide.

4 The runoff would be directed initially
5 into this area to collect it, and then to make sure the
6 suspended solids were appropriate and water quality was
7 acceptable, ultimately it would be discharged as sheet
8 flow into Baker Creek.

9 The full area would be surrounded with
10 security fencing because of the need to protect the
11 freeze system, which is as I just identified.

12

13 (BRIEF PAUSE)

14

15 MR. JOHN HULL: In B2 Pit, again just to
16 locate it, B1 is just off to the bottom and to the -- to
17 the right, this is Baker Creek on the lower right, and
18 the B2 dike which separates Baker Creek from the B2 Pit.

19 The pit slope, there's some minor
20 sloughing of the slope on the east side, and the B12 or
21 UBC portal is at the bottom of the pit, which gives
22 access to the underground mine.

23 The present plan includes some potential
24 minor backfilling of the B2 Pit, specifically on the east
25 side. That's a minor change from the DAR. That change

1 is only reflected in the possibility to improve the
2 thermal insulation against Chamber 12 in this area.

3 There may be a sealing of the B2 portal.
4 Again, because of that filling and the -- reducing the
5 risk of an overtopping of the B2 dike into this pit, so
6 that would min -- minimize the potential if it does
7 overtop, or there is leakage, of getting water into the
8 underground mine.

9 C1 Pit, the last of the -- the big pits.
10 Baker Creek is just along the west side. There's Highway
11 4, as Nathan mentioned the other day, in the relocation
12 that the -- relocation in the DAR identifies moving
13 Highway 4 in this area, and putting Baker Creek in that
14 area.

15 Or alternatively an option we're thinking
16 of proposing would move Baker Creek off to the west,
17 which would be on-site. This is defined as Reach 3,
18 which starts at about this location, and goes off to the
19 -- off to the left.

20 Again you can see there's some fairly
21 extensive underground workings under the -- under the
22 open pit. There's about six (6) crown pillars in there.
23 Investigations that have been carried out in the past
24 have identified that some of them have been backfilled,
25 some of them haven't been, and part of the ongoing work

1 would be to confirm which have been backfilled and which
2 haven't.

3 There's a minor slope instability noted in
4 this west corner -- north -- southwest wall of the open
5 pit. The plan for remediation would be to buttress that
6 southwest corner, and then buttress the north end of the
7 pit, given the present plan to move Baker Creek into this
8 -- this area on the east side of the pit. As noted below
9 at the bottom, if Baker Creek is moved to the west side,
10 the -- the filling that would be proposed would be less
11 or may not be necessary.

12 In summary, the reme -- the remediation of
13 the open pits is focussed on minimizing risk to the
14 public safety and health, protecting the environment, and
15 to manage the costs in as prac -- as efficient a way and
16 effective way as possible. The remediation measures are
17 all proposed to -- consistent with current standards for
18 health and safety and for open-pit closures in Canada,
19 and are consistent with the NWT Health and Safety -- Mine
20 Health and Safety Act.

21 The re -- remediation measures are
22 specifically focussed on B1 and B2 and C1, and they are
23 the main issues -- or main features of that include
24 fences, berming, and buttressing slopes, which appear to
25 be having minor issues with slopes to building, which

1 would be just falling of rocks and rockfalls off benches.

2 I want to stress that the proposed
3 remediation -- remedial designs are consistent with the
4 fundamental objectives in the DAR. We have, based on
5 site visits and inspections, identified some minor
6 changes, but they're all consistent with the change in
7 the proposals and the philosophy which was in the DAR.
8 The changes which we're considering, as I noted, some
9 minor backfilling in A -- A2 and possibly in C1, based on
10 what -- where Baker Creek goes.

11 I'll now ask Art -- Art to continue.

12 MR. ARTHUR COLE: Thanks, John. Arthur
13 Cole, and this is contaminated surface materials. Here's
14 a brief overview of my presentation. First of all, I'd
15 like to go through the 2007 Remediation Plan, followed by
16 the 2010 delineation investigation that we've recently
17 completed; then I'll discuss preliminary -- our
18 preliminary design strategy, classes of remedial
19 excavation, and then a summary.

20 So, as we've talked about the past few
21 days, the two (2) main contaminants of concern on the
22 site are arsenic and petroleum hydrocarbons. The
23 photograph on the right shows what typical arsenic-
24 contaminated mine rock looks like. This test strip was
25 excavated in the mill area. This is coarse material,

1 lots of cobbles and boulders, gravel. This is what
2 you'll find in most places when you excavate around the
3 mill area.

4 The photograph on the bottom right is
5 petroleum hydrocarbon-contaminated materials. This was
6 also a test that was excavated in and around the mill
7 area, and you'll see very dark staining in that material.
8 These are releases from above-ground storage tanks, also,
9 like I said, within the mill area.

10 The site in the 2007 remediation plan was
11 divided into nine (9) primary areas. These areas were
12 established based on site history and land use. The
13 materials containing the highest arsenic concentrations
14 were within the mill area and what we call Area 4, which
15 is west of the settling ponds. Hydrocarbon contamination
16 was also noted, again principally in the mill area, from
17 the above-ground storage tanks.

18 Again, this is from the -- from the DAR
19 and the remediation plan. The remedial excavation depth
20 was set at a maximum of 2 metres. This is ver -- a very
21 practical approach on this site, because most of the
22 contamination is in fact less than a metre in -- in
23 depth. Anything found below 2 metres, in terms of
24 remediation, would be capped and left in place and -- and
25 re-graded to promote drainage. This -- oh, and those

1 areas would also be delineated on maps, just to prevent
2 any accidental excavation in the future.

3 This schematic just simply shows, if you
4 were to excavate material, you'd leave some contaminated
5 soil in place if it was below 2 metres.

6 Last year, we started our delineation
7 investigations, and the first thing that we did was we
8 compiled all the historical data. And there had been
9 some previous seven (7) investigations completed, some of
10 them completed actually by Golder, and we compiled all
11 the data. We put it all on a -- on a large base map and
12 we looked at everything. And our main objective was to
13 refine the previous estimates of contaminated material,
14 so that was the purpose of what we were asked to do, was
15 to go in and look at these volumes again and confirm the
16 volumes.

17 So we -- our field program consisted of
18 about a hundred and fifteen (115) test pits, a hundred
19 and five (105) hand augers, and eight (8) boreholes. And
20 this field program, I should note, was carried out over
21 four (4) different phases, so that we didn't go out all
22 at once. It was done in multiple phases throughout 2010
23 and 2011.

24 This photograph shows a hand auger,
25 basically. So this is what you'd do when you're out in

1 the field collecting a hand auger sample, and you could
2 typically get down to about a metre with this type of
3 device.

4 So we submitted a total of three hundred
5 and thirty-six (336) soil samples for -- for arsenic over
6 our whole program, and sixty-nine (69) for -- for
7 hydrocarbons.

8 At the end of the day, we came up with a
9 volume estimate of nine hundred and sixty-thousand
10 (960,000) cubes, which is a large number, admittedly.
11 And this is close to triple of what's presented in the
12 DAR, actually. And as it's stated here, it includes
13 tailings not in the tailings containment area.

14 The increase in volume was primarily due
15 to an increase in size and depth of known areas of
16 contamination, so we haven't found any -- anything new,
17 or different than what's in the DAR.

18 Its just that the -- the areas that are
19 shown, the contamination is deeper, and in some cases a
20 little bit larger laterally.

21 So this is in essence the results of our
22 investigation, and again this drawing is not very
23 different than what's in -- in the DAR.

24 You -- you'll note some of the areas are a
25 little bit larger. For example, Area 2 here is larger

1 down I this area. Area 4 is also quite a bit larger.
2 Area 8 for the townsite -- or sorry, Area 6 for the
3 townsite right here, and Area 8, as well. So those are a
4 little bit larger laterally.

5 So the first thing that we did from a
6 design perspective is we segregated the materials based
7 on type, and again this wasn't anything new. This is --
8 previous work has -- has -- looked at segregating
9 materials. And so what we've done is -- what you can
10 note three is about over -- over a half a million cubes
11 we've categorized as wasterock. And right away we looked
12 at the -- the total volume of nine hundred and sixty
13 thousand (960,000), and said, Well, this is a very large
14 number. How can we -- we look at every single
15 excavation, and determine whether it was practical to
16 excavate to 2 metres in all of these areas.

17 So we identified four (4) areas, and maybe
18 I'll go back and show you those. The first one (1) being
19 the mill pond, where we investigated right in through
20 there, and the depth of contamination in that area far
21 exceeds 2 metres. So digging that material -- digging 2
22 metres of material out and then capping it simply
23 wouldn't allow any additional environmental benefit.
24 You're just lowering the topography in that -- in that
25 area.

1 And the same can be applied for -- for the
2 calcine area right here, and most of Area 4. The
3 thickness of contaminated materials in those three (3)
4 areas far exceeded 2 metres. So again, capping --
5 digging out 2 metres and capping wouldn't really help the
6 situation significantly.

7 So what we did was, we basically
8 eliminated those three (3) -- or those four (4) areas,
9 including Yellowknife Bay tailings, from our total
10 number.

11 So we removed three hundred and seventeen
12 thousand (317,000) cubes, and recognizing that those four
13 (4) areas would be capped but not excavated, and this
14 left us with a total volume of six hundred and forty-
15 three thousand (643,000).

16 So now we looked at that total number and
17 we said, Well, from this volume of material are there
18 some materials that could potentially, although they're
19 contaminated, could the potentially be reused on site,
20 for example, for landfill construction.

21 And so we assigned a -- an arbitrary
22 benchmark of 3,000 parts per million arsenic, which is
23 typical of the -- of tailings, and -- and determined that
24 -- or -- or we're -- we're proposing that any material
25 that's above three-hundred (300) yet below three thousand

1 (3,000) could be categorized as a marginally affected
2 material that could be reused within the tailings areas
3 potentially for landfill construction, which Gord will
4 speak about in a minute.

5 So that Type A material, most of which is
6 soil which is very beneficial, amounted to about seventy-
7 five thousand (75,000) cubes of material, and then we
8 have material which is exclusively hydrocarbon
9 contaminated. It's a relatively small volume of twenty-
10 eight hundred (2,800), which is in this column right
11 here, sorry, Type D, right there, and that could be land
12 farmed on site.

13 So if we remove the Type A and the Type D
14 materials from the total, it leaves us with five hundred
15 and sixty-five thousand (565,000) cubes, which would be
16 required for disposal on site.

17 So again, for the purposes of organizing
18 all this information we decided to -- to look at all of
19 the forty (40) different remedial excavations, again,
20 within eleven (11) areas on the site and classify them
21 based on what we call post-remediation outcomes.

22 So when we look at this we realize that
23 most of those excavations, thirty (30) out of the forty
24 (40), are relatively straightforward and can be dealt
25 with, you know, in a -- in a straightforward manner. And

1 the ex -- all the material can be remediated and that
2 those excavations can be closed, essentially.

3 The Class 2 excavations are the larger
4 ones on site and they have some isolated pockets that are
5 -- that contain mat -- impacted material deeper than 2
6 metres. And -- so there's six (6) of these locations on
7 the site.

8 And the Class 3 are the ones that I -- I
9 spoke about earlier that will not be excavated and will
10 simply be -- be capped. So this is a schematic
11 essentially showing Class 1, Class 2, and Class 3.

12 Class 1 is, like I said, it -- the total
13 of all of these, although it represents thirty (30) of
14 the forty (40) remedial excavations, it -- it amounts to
15 a little less than 20 percent of the total volume of
16 affected materials on the site.

17 The Class 2 excavations, although there
18 are -- there are sixty (60) of them and there's some
19 fourteen (14) what we call pockets that are deeper than 2
20 metres, this represents greater than 80 percent of the
21 volume of material to be remediated on site.

22 And the Class 3s, which is shown here
23 schematically, now normally this would be the are -- the
24 -- the material we'd consider digging out, but we're just
25 going to cap over that area completely. So none of that

1 material from the Class 3s will be excavated.

2 So this is a map showing -- basically
3 summarizing all of the remedial excavations and the
4 classes and types of material on the site. I recognize
5 it's a little bit hard to read. But what you can see is
6 that the yellow areas are the Class 1s and they're mostly
7 the -- the smaller locations here, what I've referred to
8 is -- as the satellite areas, small zones, shallow impact
9 that can be easily dealt with.

10 The Class 2 excavations are shown in
11 orange and that includes the mill area, Area 2, and the
12 townsite. And they will have some isolated pockets
13 remaining after we've remediated the area.

14 And the Class 3s are all shown in green,
15 and that's the -- the millpond, the calcine area, Area 4,
16 and Yellowknife Bay tailings.

17 So at the end of the day when we're
18 finished remediating, what will be left over will be the
19 -- the four (4) main capped areas, the -- the Class 3
20 areas and some isolated -- small isolated pockets that
21 are deeper than 2 metres within the Class 2 excavations.

22 And so at the end of the day this is what
23 the site will look like. Again, we see the -- the green
24 areas are -- sorry, the large green areas are the Class
25 3s right here and down here, and the Class 2 pockets,

1 very hard to see, some of them are quite small, they're -
2 - and those areas are deeper than -- than 2 metres.

3 So in summary, we've -- we've actually
4 gone through a plan to sort of develop a strategy to
5 remediate the site. We believe that this work can be
6 completed over a three year period. What we're
7 suggesting is to start from the outside -- again, the
8 satellite areas, the smaller areas, and work towards the
9 mill area and -- and all the remaining pockets, like I
10 said before, the class 2s will be capped and left in
11 place and they'll all -- all of these capped areas, the
12 class 2s and class 3s will be delineated on site maps to
13 prevent any accidental excavation in the future. Thank
14 you.

15 MR. JOHN HULL: John Hull. I'll give a
16 short discussion on the tailings remediation. I just
17 wanted to go over the -- the site and identify the key
18 areas that we're going to talk about in this -- this part
19 of the discussion. There's the tailings containment
20 areas, the north, central -- north, central and south,
21 the polishing pond and the settling pond and then the
22 Northwest Pond on the far side of the site.

23 The con -- the -- all of the sites, all of
24 the north, central and north ponds will all be capped and
25 remediated. The drainage from the sites, these -- the --

1 on the -- the north, central, and south there'll be a
2 spillway developed in this area which will then identi --
3 pass the surface water towards Baker Creek.

4 For the Northwest Pond there's a spillway
5 planned on this north -- on the west side that would then
6 drain into Baker -- Trapper Creek and then down into --
7 to Baker Creek.

8 There's also a plan to take some of the
9 tailings from the south and central pond to use as
10 backfill for backfilling some of the stopes under the
11 open pits and in the area of the arsenic chambers for
12 stability reasons and safety.

13 So just as a summary, we're going to go
14 over briefly the -- the Remediation Plan. I've
15 identified the locations. I'll note the cover systems
16 proposed, some of the details for the remediation, and
17 then a comment about the historic tailings on the
18 Yellowknife Bay side.

19 As part of the investigation for the
20 tailings, it was necessary to look for sources of borrow
21 material. We've identified numerous sources. There's
22 some overburden just to the west of the A1, A2 -- the B1
23 and B2 pits, just -- there's some material to the west of
24 C1. We're also proposing in the spillways that they
25 would act as rock quarries, and that would provide some

1 of the -- the material that's required for the closure of
2 the tailings covers. Nathan also identified that if the
3 west Reach 3 option is proposed around C1 pit, there
4 would be additional material and rock provided for the
5 capping of the tailings areas.

6 The results of the investigation have
7 identified that there's sufficient material for the upper
8 vegetative layer from these areas, and with the spillways
9 proposed and possibly minor other quarries, there's
10 sufficient rock that will be generated on the property to
11 -- to cover the tailings areas. There may be some
12 material that would also be available for other projects
13 or other capping sites. As Art has identified, he would
14 need some of the material to cap some of the contain --
15 contaminated sites areas.

16 The cover design is -- is consistent with
17 what is presented in the -- in the DAR. It consists of a
18 vegetative support layer, a gravel or coarse layer which
19 acts as a barrier for material roots from any plants that
20 grow on the -- the vegetative cover, and would prevent
21 migration of pore water from tailings up into the -- the
22 vegetative layer.

23 The objective of the -- the cover system
24 is to provide a physical barrier between the tailings and
25 the sludge and the surrounding environment. It's to

1 prevent tailings dust release and in direct physical
2 contact of the -- the area -- of anybody in the area or
3 mechanical erosion occurring on the tailings. It also
4 prevents exposure to the surrounding environment of the
5 arsenic contained in the tailings and the sludges.

6 This -- to explain that, what we're saying
7 is that any surface water that would flow off of the
8 tailings cover areas would not come in contact with the
9 tailings; it would be in contact with the vegetative
10 layer. It would be non-contact water which could be
11 directed towards Baker Creek after the -- the covers and
12 the caps are stabilized and have reached steady state,
13 and the vegetation there's no erosion or sediment issues.

14 The cover also limits infiltration and
15 would establish -- or allow establishment of a self-
16 sustaining vegetation which would be focussed in the long
17 term with local species, and minimizing and trying to
18 prevent any invasion of non-native species.

19 The -- the program or the pro -- proposal
20 would identify that the tailings surfaces would be re-
21 graded to uniform slopes to promote drainage. The south,
22 central, and north ponds will be graded to drain to the
23 north pond. This may -- this includes infilling the
24 north pond. The slopes we're proposing would be graded
25 at 1 or 2 percent to allow for a -- generally a flat

1 slope, which would be easily vegetated, and there would
2 be minimal erosion off of that slope. Any main drainage
3 channels would be lined or armoured with riprap.

4 The present plan at the moment is to
5 consider one (1) of the potential landfill sites on the
6 central pond, in part because it's close to the mill
7 area. There are other locations being considered, but
8 this is one (1) potential area. We do note that some of
9 the material from the central and south pond would be
10 removed for underground backfilling.

11 The polishing pond and settling pond,
12 which are part of the water treatment plant system, would
13 also be covered with the same cover, and surface water
14 drainage would be connected so that it does drain with
15 the north pond drainage towards the -- the Baker Creek.

16
17 (BRIEF PAUSE)

18
19 MR. JOHN HULL: There's ongoing
20 maintenance and monitoring proposed. The monitoring
21 would -- in the -- the initial years would be fairly
22 frequent.

23 It's anticipated that it would take two
24 (2) to three (3) years to establish a stable cover on top
25 of the tailings on the vegetative layer.

1 As the vegetative layer and the cap
2 stabilizes, and reaches a steady state, it is anticipated
3 in the long term that that monitoring would reduce, but
4 again that would be defined by the performance of the
5 cover which would be detailed as measures of succ -- of
6 success as the project evolves, and the detailed design
7 components are put together.

8 Maintenance that's envisioned in the short
9 term would be revegetation, overseeding, fertilizing,
10 minor repair of erosion, and it's anticipated there may
11 be some areas of -- that would settle in -- in the near
12 term. They would be fixed, and made -- making sure that
13 the surface drainage did continue towards the drainage
14 channels, and as I said, toward Baker Creek, and for the
15 Northwest Pond, toward Trapper Creek.

16 The other area that is being capped is the
17 foreshore tailings that was beside Area 8 that Art
18 showed. Most of that area has already been capped. The
19 intent is to further stabilize the beach with the --
20 extending the -- the present system that's in place. It
21 would be extended to minimize further erosion of the
22 tailings in that area using the -- the same design that's
23 been successful there since nineteen (19) -- since 2003.

24 It would be extended into the -- out -- to
25 the edge so that that's within the -- below the wave

1 zone, and the tailings are not exposed in time.

2 The existing design consists of a rock
3 layer over a geotext -- sorry. The existing design
4 consists of gravel over geotextile, which in -- extends
5 into the beach area. It would extend to the areas as
6 identified where there's wave action. The tailings
7 further up the valley will be remediated as part of the
8 contaminated sites program -- soils program as identified
9 in Art's discussion.

10 There's no plan to cover the tailings
11 within the Yellowknife Bay beyond the littoral, or the --
12 the wave zone.

13 THE FACILITATOR EHRLICH: Mr. Hull, I'm
14 just going to step in for a second here, as a scheduling
15 thing. I'm going to give you whatever time you need to
16 make the presentation. The just question is -- the only
17 question is will it be before or after lunch.

18 How many more minutes roughly do you think
19 you've -- you've got, and then you have one (1) other
20 presenter after this?

21 MR. JOHN HULL: Two (2).

22 THE FACILITATOR EHRLICH: So can you give
23 me an estimate roughly the number of -- of minutes that -
24 - of total presentation the Giant team has left on -- on
25 this subject?

1 MR. ADRIAN PARADIS: Ten (10) minutes.

2 Well, there's -- the -- I've spoken briefly to the
3 parties about the air quality presentation and I think
4 for the sake of expediency, we'll cut that off of our
5 presentation, which will re -- get us out of here
6 quicker.

7 We'll still have our experts around to
8 discuss air quality after the break.

9 THE FACILITATOR EHRLICH: And for the
10 record, that was Adrian Paradis speaking.

11 I don't want to entirely forego the air
12 quality presentation, but if you wish to condense it to a
13 couple of key slides, and a summary that would be useful
14 as well.

15 What I'd rather do is not do all of this
16 before lunch. John, do you think that you've got more
17 than five (5) minutes left in this one?

18 MR. JOHN HULL: John Hull. That was the
19 last slide. Only the last comment was that the design --
20 design concept and plan for the tailings cover for the
21 south central, north, and Northwest Pond are consistent
22 with the design philosophy in the DAR.

23 I'll now pass it to Gord.

24 THE FACILITATOR EHRLICH: Okay, let's --
25 let's take that pass after lunch. I -- I thank you,

1 John, for what has been a -- I think a very -- you
2 covered a lot of ground, literally and figuratively in
3 this.

4 We've got five (5) minutes just before
5 lunch. I don't want to start a presentation that isn't
6 going to get finished. I do have a question about the
7 overall amount, and forgive me if I didn't pick it up in
8 here, but on one (1) of the tours the amount of surface
9 tailings, as I recall the DAR mentioned something about
10 16 million tonnes.

11 Is that still the correct figure for the
12 amount of tailings needing to be remediated here?

13 MR. JOHN HULL: That's the approximate
14 volume of tailings on surface, yes.

15 THE FACILITATOR EHRLICH: The tonnes
16 would be more mass than volume, right?

17 MR. JOHN HULL: That's mass that --
18 there's approximately 90 to 95 hectares of surface area
19 that has to be covered.

20 THE FACILITATOR EHRLICH: I'm never good
21 with hectares, having grown up on metric but I was built
22 with Imperial. What was told to me on one (1) of the --
23 the site visits was it's about three hundred (300)
24 American football fields.

25 Is that about right?

1 MR. JOHN HULL: John Hull. That -- yes,
2 that's approximately correct.

3 THE FACILITATOR EHRLICH: It's -- I mean
4 -- you know, I mean I know it seems kind of weird, but
5 you guys are dealing with a project of such scale that
6 you have many numbers that a lot of people don't deal
7 with on a day-to-day basis. If you're not an engineer,
8 you're not dealing with these kinds of things directly.

9 And I felt a lot of people tend to gloss
10 out -- they sort of glaze over after the first three (3)
11 or four (4) zeros, and not distinguish between the very,
12 very large numbers and the merely big numbers.

13 But those things on the ground pose some
14 serious challenges with respect to the project, and I
15 know you have to wrestle with that all the time.

16 So, you know, I've been trying to make an
17 effort, and I will continue to do so in -- in this
18 technical session, not as much here because of the --
19 just the staggering number of engineers populating the
20 room right now, but -- as well as in the rest of the EA,
21 to try and make the big numbers meaningful to the people
22 who have to understand them.

23 And I see that the Giant team has gone to
24 some length to try and do that for the public to date,
25 and I think that's -- that's been a pretty helpful move.

1 We can break now for lunch. I don't
2 really think we've got enough time for any other
3 questions. It's five (5) minutes to 12:00. I want you
4 to get a jump on the lunch crowd again.

5 Let's meet back here -- we're gonna start
6 at 1:15 promptly, and we'll start with Gordon's
7 presentation. At 1:15 promptly. Thank you.

8

9 --- Upon recessing at 11:55 a.m.

10 --- Upon resuming at 1:17 p.m.

11

12 THE FACILITATOR PHILLPOT: Darha
13 Phillpot, for the record. Thanks very much. I hope
14 everyone had a good lunch. We're going to resume where
15 we left off before the lunch break, so, without further
16 ado, I'll turn it over to Gordon who will continue with
17 the presentation from contaminants and remediation
18 directorate.

19 MR. GORDON WOOLLETT: Good afternoon. My
20 name is Gordon Woollett, and this is the waste management
21 presentation for these technical sessions.

22 This -- this pres -- presentation will
23 include a discussion of the following items: a summary
24 of current waste locations; an overview of waste types
25 and volumes; hazardous material removal processes; our

1 view of waste disposal options; a non-hazardous landfill
2 site location design overview; and long-term monitoring.

3 The waste at Giant Mine are essentially
4 located in three (3) areas. These consist of surface
5 debris piles, which are waste materials in used equipment
6 storage areas; building demolition wastes -- these would
7 be wastes generated when all the structures and
8 utilities, with no future use, are demolished; and
9 hazardous waste, currently located underground,
10 consisting of construction materials, equipment, and
11 supplies.

12 This is a slide of an overview of Giant
13 Mine, and currently there's approximately a hundred (100)
14 structures and they're concentrated in the areas of
15 Akaitcho, the TRP, A, B, and C-shafts, as well as a
16 townsite. There's also another twenty-three (23) service
17 debris areas that have been identified and inventoried.
18 They're scatter -- they're scattered around the mine site
19 and shown in black in this figure.

20 The types of waste on site can be
21 separated into a number of different categories. These
22 wastes are typically defined by territorial or federal
23 reg -- leg -- legislation, excuse me. The waste streams
24 include both hazardous and non-hazardous items. So at
25 Giant Mine, we have a large volume of non-hazardous

1 wastes, and these would be wastes such as scrap metal,
2 wood, glass, concrete, fibreglass, and paper.

3 Hazardous waste would include items such
4 as mercury containing equipment, ozone-depleting
5 substances, asbestos, PCB containing equipment, and a
6 category here called other TDG, but these would be items
7 such as corrosive materials, solvents, petroleum
8 products, flammable materials, any kind of use and mill
9 process chemicals that remain onsite.

10 We also have a volume of leachable lead-
11 containing items, particularly pai -- located in paints.
12 There's arsenic trioxide dust located in the roaster
13 complex. Also in the mill buildings, we have semi-
14 processed ores which are non-arsenic trioxide containing.
15 And then it'll be the sludge that'll be generated from
16 the waste water treatment plant.

17 Just to assist with the preliminary
18 design, there's a requirement to estimate the volume of
19 the various waste streams. These field surveys were
20 completed in 2010 and 2011 to help us estimate those
21 quantities. The surveys include the collection of field
22 measurements and analytical testing to identify hazardous
23 building materials and hados -- hazardous products.

24 Based on the lab data and field
25 measurements, calculations were made to help estimate the

1 volumes of each material, and volumes presented in
2 previous surveys completed in 2003 and 2009 were also
3 utilized in our overall waste volumes. And, once again,
4 these surveys were completed on all surface debris piles,
5 all structures, and hazardous mater -- materials
6 underground.

7 This slide presents a summary of the total
8 volumes of each waste category that have been currently
9 identified. As noted here, there's approximately 67,000
10 cubic metres of non-hazardous waste and 14,000 cubic
11 metres of hazardous products.

12 During the demolition program, the
13 hazardous wastes will have to be removed, and this is a
14 slide that kind of summarizes the main abatement methods.
15 Certainly, the contractor will be removing these items
16 prior to the building demolition and not afterwards.
17 Underground hazardous materials will have to be removed.
18 Hazardous materials will be collected, packaged, and
19 transported according to applicable regulations, and non-
20 hazardous materials will be decontaminated prior to
21 disposal in the onsite landfill.

22 An overview of waste disposal. So this
23 table represents a summary of our current design concepts
24 for the proposed disposal of each waste material. So for
25 non-hazardous wastes, currently we're looking at a -- a

1 design concept as an onsite landfill in the area of the
2 central tailings pond. Asbestos waste would be disposed
3 of in a dedicated area within that pond -- or, sorry,
4 within that landfill. Semi-processed ores, which are
5 non-arsenic trioxide containing, would be located into a
6 tailings pond. Any kind of item with PCBs, TDG items,
7 mercury, ozone depleting substances, fuel oils, all would
8 be disposed of out of the territories for ultimate
9 disposal.

10 Ongoing right now we are evaluating
11 options for the disposal of any arsenic trioxide dust
12 that is going to be recovered from the roaster complex.
13 We're proceeding with the evaluation of options -- options
14 that were identified in the DAR, which included disposal
15 underground in Chamber 15, disposal in the B1 Pit or --
16 disposal of -- in a new underground chamber, or a
17 surface pit, or quarry.

18 We're also doing further evaluation on how
19 to dispose of the water treatment plant sludges that were
20 discussed earlier this morning. The items included in
21 the DAR were for a short-term period. We disp -- tried
22 to dispose of these materials in the frozen zone, so the
23 short-term there would be during the implementation of
24 the freeze and after it's frozen we'd end -- end up
25 moving that material to a new facility dedicated for

1 disposal of the sludge itself. The location of that cell
2 has not been decided upon and certainly characterization
3 -- further characterization of that waste will help us
4 identify disposal requirements.

5 This is a shot showing the area of the
6 central pond that we have available for disposal of the -
7 - of our waste in the area of the Central Pond. It shows
8 in relation to the North Pond, the South Pond, and the --
9 the other mine infrastructure.

10 The slide on the right shows the more
11 detailed area of the Central Pond. So the preliminary
12 design is being based on using the Central Pond as our --
13 as a disposal location for our landfill. This location
14 was chosen for a number of reasons including the -- its
15 central location. It's close to all major mine
16 infrastructure and it helps minimize haul distances, and
17 it helps minimize highway traffic -- hauling traffic
18 across Highway 4.

19 This proposed location is -- fallen into
20 the DAR, which specifically the landfill will be located
21 on a previously disturbed area and on top of a tailings
22 pond.

23 Other disposal options are available on
24 the property. These include using the South Pond, or the
25 North Pond, or even the Northwest Pond, which is

1 suggested in the DAR, or we can also -- would be a
2 deviation from the DAR would be to put the landfill in a
3 previous disturbed area.

4 Land -- landfill design. Here's a typical
5 section of a non-hazardous waste landfill. As indicated
6 in the DAR the landfill will be constructed with
7 alternating layers of waste and intermediate fill. And
8 other design features include a surface cap which will
9 help prevent water infiltration into the landfill, as
10 well, shed water to the exterior ditching. Other
11 features also include groundwater monitoring.

12 As indicated in the DAR the monitoring
13 would include annual inspections of all the constructed
14 items and to observe any evidence of changes; groundwater
15 monitoring both in shallow and deep monitoring wells;
16 well sampling done following industry standards; and
17 annual reportings being generated.

18 Just to conclude here, the central
19 tailings pond is being considered for the construction of
20 a non-hazardous landfill. There's a lot of area
21 available for the pond -- or for that -- in that pond
22 area for construction for a landfill. We propose to
23 dispose of asbestos waste in this same landfill.

24 And currently, the evaluations are being
25 completed to identify disposal locations for the arsenic

1 trioxide dust that we recovered, as well as the sludge
2 that will be generated from the waste -- from the water
3 treatment plant.

4 All haz -- hazardous waste will be
5 disposed of off site and there'll be, once completed, a
6 ongoing monitoring program and inspection program on the
7 landfill site. Thank you.

8 THE FACILITATOR PHILLPOT: Thank you for
9 that, Gordon. Next we'll turn to Bruce Halbert for the
10 final part of the developer's presentation. And we just
11 ask that you please provide a high-level summary, the key
12 points of your presentation in the interest of time and
13 that will leave more time for questions and where we can
14 get into any details that parties may have about this
15 subject.

16 MR. BRUCE HALBERT: Thank you. Bruce
17 Halbert. I will indeed shorten my presentation. On this
18 slide I just want to point out we looked at four (4) --
19 four (4) indicators of air quality, if you will, of
20 issue, particulate matter, arsenic and then nitrogen
21 dioxide and sulfur oxides -- or sulfur dioxide and
22 nitrogen oxides, like I said earlier on.

23 I'm gonna focus briefly here on arsenic
24 because that's the main contaminative interest. This is
25 a -- a summary graph taken from the -- the GNWT

1 environmental air quality monitoring station in
2 Yellowknife. It covers a period from 1973 to 2007. On
3 the left-hand scale, we -- it shows the -- the annual
4 average arsenic concentration in micrograms per cubic
5 metre. These are the bar -- the bars are the -- the
6 annual averages, and on the right-hand side, we have the
7 twenty-four (24) hour maximum arsenic concentrations, and
8 they are the boxes.

9 The only message I want to deliver out of
10 this is that air quality certainly has improved over
11 time, and subsequent to 1988, when there was some
12 baghouse failures and a couple of exceedances of the air
13 quality standard -- I'm going to refer to it briefly --
14 the air quality has been quite good as far as arsenic is
15 -- is concerned, and particularly in the last decade.

16 The air quality criteria I'm going to
17 compare it to here is -- is .3 micrograms per cubic
18 metre. It is one taken from the Ontario Ministry of
19 Health, as neither the GNWT or Government of Canada have
20 arsenic criteria at this point in time.

21 I'm gonna slip by a few of these slides
22 very briefly. The -- the work that was undertaken was
23 undertaken in air quality assessment using a USEPA model,
24 that ISCLT, that we use for screening level assessments,
25 and some of the -- that model was used to predict one (1)

1 hour, twenty-four (24) hour and annual average ground-
2 level concentrations of the parameters I noted.

3 And for this assessment, we took a --
4 undertook a very conservative or cautious approach to do
5 the screening, in that we assumed a number of activities
6 were occurring onsite at the same time. So we assumed,
7 in the first case, that we had a freeze plant in
8 operation, one (1) of the chambers has been piped and the
9 power -- or the plant turned on, requiring a power supply
10 of up to 3 megawatts of power. We assumed Baker Creek
11 remediation activities had been started near the mouth of
12 Baker Creek. We assumed that contaminated soil
13 excavation and remediation had been commenced in the area
14 of the -- of the roaster. We also assumed that
15 remediation activities had been initiated in the south
16 tailings pond area and on the sludge ponds; also, that a
17 free -- that active drilling was going on for the
18 additional installation of freeze pipes, and, finally,
19 that the roaster complex was being decommissioned.

20 So we had -- this is an unrealistic
21 scenario, and it's very unlikely all these would occur
22 simultaneously, but it allows us to -- to take a
23 screening assessment of what the combined effects are of
24 all those activities.

25 I'm going to skip by this slide, because

1 it just outlines some of the assumptions that went into
2 the analysis.

3 We assessed air quality both onsite and
4 offsite. For the offsite receptors, we looked at five
5 (5) specific locations, one being up in the area of the
6 Yellowknife River Park, community of N'Dilo, community of
7 Back -- that's on Back Bay at the marina, and at the
8 landfill.

9 When we do an air quality modelling
10 assessment, we predict concentrations at a ho (phonetic)
11 grid of grid point overlaying the whole area of interest,
12 and that data is subsequently analyzed to create what we
13 call concentration contours or isopleths. That's what
14 this -- that's what this -- back here again. Sorry.
15 That's what this figure is showing.

16 In the left-hand figure here, we're
17 showing, with inclusion of wind erosion effects -- this
18 is the wind erosion mainly of like the exposed tailings,
19 and then, on the right-hand side, we've taken away that
20 wind erosion component, just to show what the effect is
21 of wind-blown dust.

22 And the -- the contour of interest here is
23 the -- the one I was showing you in red is the .3
24 microgram per cubic metre contour I suggested. You can
25 see basically any effects of -- of activities. All these

1 activities are very limited to the site area itself, and
2 as we move off, the concentrations drop off quickly.

3 This slide summarizes the predicted
4 arsenic concentrations, with a maximum twenty-four (24)
5 hour comparison here for each of these offsite receptors.
6 And on the bottom we have shown this air quality
7 criterion I mentioned, the .3 micrograms per cubic metre,
8 and the background level that's measured at the
9 monitoring station in Yellowknife of point zero zero four
10 (.004).

11 The point -- important point of message
12 here is that all these predicted concentrations are well
13 below the criteria, and by -- by at least a factor of ten
14 (10).

15 I'm going to skip over the rest of these -
16 - these particular slides. They summarize similar
17 information for particulate matter, we -- and there we
18 look at total suspended particulate matter, as well as
19 two (2) smaller sized fractions, what we call PM10 and
20 PM2.5. That stands for micron size particles. Again,
21 the same message, we're well below criteria.

22 The same applies for nitrogen dioxide.
23 This is a really a result of the power generation station
24 and operation of all equ -- construction equipment on
25 site, it affects the NO2 levels.

1 The same comparison with the same
2 receptors, same result. We're -- we're below criteria
3 across the board. And finally, for sulfur dioxide it's
4 the -- it's the same message. Okay. So we -- we -- from
5 the screen level assessment we -- we conclude in the very
6 conservative nature of it that there are no really air
7 quality issues to be concerned about. Post-remediation
8 air quality pro -- air quality emissions basically
9 disappear from the site, so the interest is really during
10 the implementation period.

11 The overall conclusions of the study were
12 that the -- there are no predicted exceedances of air
13 quality indicators associated with the worst-case
14 scenario at any of the receptor locations.

15 Of particular in -- importance, arsenic
16 concentrations at all sensitive receptor locations are
17 predicted to -- to remain well below applicable criteria.
18 Air quality monitoring of TSP and metals has been in
19 place on the Giant Mine site since 2004. And as I
20 mentioned, there's also a monitoring station that has
21 been in operation for several decades by the GNWT.

22 The existing Air Quality Monitoring
23 Program will be modified and incorporated into the Air
24 Quality Management Plan prior to the initiation of a --
25 of site remediation activities.

1 To facilitate adaptive management the Air
2 Quality Environmental Monit -- Management Plan will
3 identify action levels that trigger additional management
4 actions if required.

5 Site-wide air quality monitoring will be
6 continued until surface remediation activities are
7 complete and for three (3) years thereafter. At that
8 time the need for continued monitoring will be assessed
9 and revisions to the program will be made as appropriate.

10 This slide summarizes briefly where we
11 proposed in the -- in the DAR for monitoring to be
12 carried out on an ongoing basis during the remediation
13 activities with a -- what we call high vol sampler in the
14 area of the old Giant Mine townsite, two (2) other mini
15 vol type facilities along the east side of the site and a
16 couple more in the west side, south and west side.

17 There's one (1) additional point I'll
18 touch on and this will be the end of my presentation. We
19 were asked to also assess what the -- the effects would
20 be on NO2 levels as a result of the Jackfish power
21 generations plant operating at full capacity. That is at
22 27 megawatt generating capacity.

23 Our initial screening on that indicated
24 that we would potentially have exceedances at several of
25 the -- of the receptor locations we looked at. We are in

1 the process right now of undertaking a -- a detailed
2 assessment.

3 And with that I'll...

4 THE FACILITATOR PHILLPOT: Thank you,
5 Bruce. This is Darha Phillipot with the Review Board.
6 We're now going to take a moment to move our table up so
7 that we can see a little bit better for facilitating
8 purposes, so one (1) moment.

9

10 (BRIEF PAUSE)

11

12 QUESTION PERIOD:

13 THE FACILITATOR PHILLPOT: Thanks very
14 much. We're now going to move to questions from parties.
15 Before we begin I do want to point out that at the break
16 two (2) parties came to indicate to us that they won't be
17 here for the full afternoon, and that was the City of
18 Yellowknife. I believe they said 2:30 was the estimate -
19 - estimated time that they'll be leaving, and DFO also
20 this afternoon will be leaving at 3:00.

21 So if they have questions, or if there are
22 questions for them, remember that you should get those
23 questions out early. And so to begin, are there any
24 questions? Jeff Humble, City of Yellowknife...?

25 MR. JEFF HUMBLE: Thank you. Jeff

1 Humble, City of Yellowknife. I'd like to lead by just
2 following up a bit with regards to the question yesterday
3 pertaining to the marina. And in this instance we're --
4 we're looking toward the land portion of the -- of the
5 site. And when I say the site I'm referring to the --
6 primarily to the townsite.

7 The DAR discusses remediation standards of
8 the site to the industrial standard and the Review Board
9 determined that soil remediation was acceptable, as it
10 was an improvement to the existing soil conditions.

11 Throughout the process the City has
12 continued to emphasize the need to remediate Giant Mine
13 to a residential standard. This is the traditional use
14 of the site since the mine was established. And we
15 already have an overcapacity of industrial land in the
16 City.

17 In addition to developed and undeveloped
18 industrial lands within the boundaries, further
19 industrial lands will be added as a result of the
20 remediation of Con Mine.

21 We had negotiated with Newmont Mining to
22 remediate a portion of these lands to the residential
23 standard. Given the socioeconomic and environmental
24 legacy of Giant Mine on the City and the region, the City
25 requests fuller analysis of acceptable remediation

1 standards at the site to a residential standard.

2 And we have requested this as part of our
3 Information Requests, and from what I gather the response
4 from the developer is a willingness to certainly discuss
5 and provided information on that matter.

6 There was also a direction that the City
7 may explore directly with the GNWT and other avenues. I
8 was just wondering what other revenues are available to
9 the City on this matter?

10 THE FACILITATOR EHRLICH: So the question
11 that I'm hearing is a clarification on Giant -- the Giant
12 team's IR response, which correctly pointed out the
13 remediation standards outside of the scope of the
14 environmental assessment, but the response suggested that
15 you look at other avenues for discussing this, and your
16 question is, What oth -- other avenues was the -- the
17 Giant team referring to in that -- in that response?

18 MR. JEFF HUMBLE: That's correct. Jeff
19 Humble.

20 THE FACILITATOR EHRLICH: I -- I think
21 that's a fair enough question. What did the Giant team
22 have in mind?

23

24

(BRIEF PAUSE)

25

1 MR. ADRIAN PARADIS: Have -- have a
2 moment here, please. And Adrian Paradis for the Giant
3 team. We'll ask Ray Case to respond.

4 THE FACILITATOR EHRLICH: And for the
5 Review Board side, to make clear, we're not suggesting
6 that as part of the EA discussion of the remediation
7 standard of residential versus industrial is -- is
8 required, we're just looking for a clarification on the
9 IR response that you chose to put on record.

10 DR. RAY CASE: Ray Case, Giant Mine team.
11 As you might be aware, the -- the Giant Mine team is --
12 is very much aware of the -- the City's interest in -- in
13 using the townsite area at some point in the future for
14 residential development.

15 We have been keeping that in mind as we go
16 forward to take a look at how the -- the site would be
17 remediated, and how -- what the activities at -- at the
18 townsite would -- would be.

19 And so as -- as we're developing that we
20 see an opportunity to engage in some further direct
21 discussions with the -- with the City as to what are our
22 -- our final design plans are -- are looking at -- like,
23 and how that relates to what their developing concept of
24 what the -- the site would be like in the future.

25 I will highlight that, you know, portions

1 of the townsite are already at residential standard. The
2 project is looking to -- to move the pro -- the whole
3 area to -- to, at minimum, industrial standard. And
4 beyond -- with -- with removal of some fill material we
5 could leave some of the area -- additional areas could
6 also be converted to -- to a better standard.

7 So we're certainly open to have those
8 discussions and make -- see how the remediation at the
9 site and the interest of the City can -- can align as we
10 go forward.

11 THE FACILITATOR PHILLPOT: And so just to
12 clarify, we heard that the question of Jeff Humble as
13 really what -- what are the avenues for further
14 discussions, when and where, and so perhaps further
15 specifics to that question would be helpful for the
16 record.

17 DR. RAY CASE: Ray Case. We -- the --
18 the Giant Mine remediation team will provide some contact
19 information on some members for the -- the City to -- to
20 contact directly.

21 And if we don't hear from the City, we
22 will be in touch with them.

23 MR. JEFF HUMBLE: I just have a few more
24 related questions, if -- if I may ask. Jeff Humble, for
25 the record.

1 THE FACILITATOR EHRLICH: I -- I just
2 want to make sure I -- I understood what I just heard. I
3 mean, because the -- the content about the remediation
4 standard is not part of the environmental assessment, it
5 still sounded to me like the Giant team expressed
6 openness to meet and discuss with us outside the setting
7 of the -- of the environmental assessment. I see
8 everyone nodding their heads.

9 If it was inside the scope of the EA, I
10 would say, We've just heard a commitment from the Giant
11 team to meet with you outside of the EA to do it. But we
12 don't actually track commitments outside of the
13 environmental assessment, so I'm not exactly sure how to
14 do it, except for that it appears that the Giant team is
15 willing to do what -- to meet with you as you want to
16 meet with them. And since it's outside the scope of the
17 EA, I don't want to chase that particular line any
18 further.

19 Are you okay with where that got to,
20 considering that it's outside the scope?

21 MR. JEFF HUMBLE: I am. I might have a
22 few more questions, if I can, and then just get to the
23 heart of -- of what I think we would like to make as the
24 request to -- to, I guess, engage that process.

25 So, may I proceed with a few more

1 questions?

2 THE FACILITATOR EHRLICH: Fire away.

3 MR. JEFF HUMBLE: Jeff Humble, City of
4 Yellowknife. In one (1) of our IRs we referred to the
5 development permit process for the City of Yellowknife,
6 and -- and that process, essentially, requires a
7 development permit for certain works that are undertaken
8 within City boundaries.

9 The IR response referred to Section 98 and
10 the lack of clarity because of the review of Section 98
11 of the Mackenzie Valley Resource Management Act, and
12 that, I believe, has been concluded, and it's my
13 understanding that the jurisdiction of development
14 permits is still within the City of Yellowknife
15 jurisdiction.

16 Can the Board or the developer clarify,
17 please?

18 THE FACILITATOR EHRLICH: I'm going to
19 ask the Giant's team to respond to that given the -- the
20 new information that they provided over the last couple
21 of days having to do with the fact that they -- they will
22 need a permit, a land-use permit, for the -- for the
23 project.

24 I wonder, do you have information that
25 might help answer Mr. Humble's question?

1 MR. ADRIAN PARADIS: Adrian Paradis for
2 the Giant Mine project team. Yes, with the new -- with
3 the Section 98 decision, we have met with the Land and
4 Water Board and we've had brief discussions with the
5 Impact Review Board and with the City about getting the
6 land-use permit.

7 We also met last week to talk about what
8 would be in -- starting to understand and starting to
9 assess what a development permit may -- may include or
10 may not include, and I believe those discussions are very
11 preliminary, just with the recent discussion -- with the
12 recent decision.

13 THE FACILITATOR EHRLICH: Mr. Humble...?

14 MR. JEFF HUMBLE: Jeff Humble, City of
15 Yellowknife. Tying the two (2) issues together, I mean,
16 the City -- we did meet and have discussions on this
17 matter, and it's very unclear at this point to what
18 degree the City wants to regulate the development permit
19 process. We have the authority to do so. We have the
20 authority to, from our perspective, hold up components of
21 this project based on the level of detail that we would
22 normally require for a development permit process in the
23 City.

24 What I'm looking for from the developer is
25 a commitment to engage with the City in a public workshop

1 on a land-use plan for the town site and the surrounding
2 areas, including opportunities for recreational space,
3 transportation, trails, things of that nature; and,
4 subsequent to that, to get into an MOU process that would
5 allow the City to work with the developer to proceed down
6 a process that we can work together to realistically say,
7 This makes sense to remediate, this is not going to be
8 too onerous, this is going to fit in with the overall
9 remediation of the site.

10 We -- we don't see how you can put forward
11 a remediation plan when you're not looking five (5) years
12 beyond what the end use of the site's going to be. So we
13 -- we feel that's a major shortcoming of this whole plan,
14 and I guess we'd be seeking -- seeking a response from
15 the developer. Thank you.

16 MS. LISA DYER: Thanks, Jeff. I just
17 want to clarify some of the -- the issues you brought up.
18 You talk about a public workshop, and I guess I'm just
19 trying to clarify: What exactly do you see that
20 entailing?

21 MR. JEFF HUMBLE: Jeff Humble, City of
22 Yellowknife. We -- the City of Yellowknife, we have, I
23 would say, a fairly high level of expertise in public
24 consultation. We engage the public on many issues, but,
25 generally, a development scheme process which invites the

1 public to look at opportunities in terms of how the site
2 would lay out in the future, pockets that would be
3 residential, incorporation of the marina, trails,
4 recreation space. And we would work within the
5 confinements of what is really practical, you know, from
6 the perspective of the Giant Mine team, but we can't make
7 commitment to any of our plans.

8 We have a -- a Giant Mine study that we
9 completed ten (10) years ago. We've been held up for ten
10 (10) years on this -- on this redevelopment of this site
11 because of this process, similarly, as I mentioned
12 yesterday, with the -- with the harbour plan, and we
13 can't answer these questions any sooner than you can
14 unless we're working together.

15 And we have to engage the public in this
16 process or we're going to end up with a plan on your end
17 or on our end that just isn't going to be feasible.
18 That's a waste of -- of taxpayers' money and the
19 community, of the City of Yellowknife, not to mention
20 YKDFN and other folks that are in the region.

21

22 (BRIEF PAUSE)

23

24 DR. RAY CASE: Ray Case, Giant team. The
25 -- the team is -- is very interested, and perh -- maybe

1 you -- overdue to -- to get additional information on
2 public interest of what future use of -- of the site is
3 going to be. And I think the session on Tuesday -- or,
4 sorry, Friday, is something -- that is something that
5 we're -- we're highlighting.

6 With respect to, you know, mechanisms to -
7 - to get that input, the -- the team is -- is willing to
8 -- to participate in -- in those mechanisms. We can
9 certainly be available to -- to provide information about
10 the -- the site and -- and some of the future limitations
11 that might be on the site as a result of the remediation
12 plan, and help inform some of -- some of that discussion.

13 The -- the remediation plan and approach
14 still needs to maintain its focus on securing the site,
15 on the -- ensuring that the issues around risk to the
16 environment and public health and safety are -- are
17 addressed, but, beyond that, we can provide information
18 to a public forum on -- on opportunities and limitations
19 provided by the site post-remediation.

20 THE FACILITATOR EHRLICH: Mr. Humble...?

21 MR. JEFF HUMBLE: I guess this would be
22 partly a question for the Board but, I mean, we
23 understand the -- the principles of how this plan was
24 undertaken, the guiding principles and the -- the INAC
25 sustainable development strategy when we talk about

1 things of full consideration of economic viability and
2 social implications, and open and accountable decision
3 making and -- and an engagement in the interests of the
4 local communities.

5 So we're looking for a real engagement
6 process here that, from the City's perspective, we have a
7 host of issues, but this is really the heart of what the
8 long-term community interests are. And if we're not
9 engaging this process and we can't get some kind of a
10 guarantee, then perhaps we need to explore, as suggested
11 in the IRs, other avenues to try and get this done.

12 And I'm just not hearing, I guess, the
13 level of commitment that -- you know, verbal discussions
14 is going to get us to the level of comfort that we feel
15 we really need to move to to get this thing advanced to
16 the point where -- where we're actually progressing on --
17 on a land-use strategy that's -- that's practical.

18 So, I don't know if the Board can provide
19 any guidance on how we might want to approach this, but,
20 as I stated, you know, commitment to some kind of a
21 workshop, and then a subsequent MOU that's got some
22 flexibility worked in to -- to work with -- with the
23 development team.

24 THE FACILITATOR EHRLICH: Just to
25 reiterate what I said earlier, although the standard of

1 remediation is outside the scope of the EA, what I've
2 heard from the Giant team a moment ago sounded like an
3 openness to participate at a workshop, and an interest in
4 -- in further communications to and with the public on
5 the project. This sounds to me like what you're asking
6 for. Am I missing something there?

7 MR. JEFF HUMBLE: Certainly the
8 commitment to the workshop -- I mean, if that's basically
9 what we've heard, that's fabulous. That's great. But we
10 would like something in writing -- Jeff Humble, City of
11 Yellowknife -- that we can -- that we know we're
12 committed to this process. We're not just going to do
13 something and then walk away from -- from an obligation
14 to work together on this -- on this process.

15 THE FACILITATOR EHRLICH: Okay. Out --
16 outside of -- because this is not -- the future land uses
17 in that area are not -- the standard of remediation is
18 not part of the scope of the assessment, but since both
19 parties that are raising this seem to be quite willing to
20 do what the other one wants, can I ask if at least the
21 Giant team is -- is willing to engage in some direct
22 correspondence with the City outside of the public record
23 of the environmental assessment?

24 Because it's not in the scope, just making
25 clear what level of involvement at a workshop you're

1 prepared to do more or less elaborating on that, but I
2 don't want the discussion here to -- to focus on
3 something outside of the scope in any more depth than it
4 has.

5 Would you be able to write such a letter,
6 and discuss this with the City, and clarify how you could
7 be involved with that kind of workshop?

8 MS. JOANNA ANKERSMIT: Yeah. Joanna
9 Ankersmit. We'd be happy to -- to provide some
10 correspondence to that effect.

11 Before we do that, I think we should
12 actually talk to one another, and talk about kind of what
13 the plans are, and -- and what the City would hope to
14 see, and they can -- you know, it makes sense that we do
15 some things together.

16 Obviously we're not trying to artificially
17 de-link certain elements of what makes sense, so we can
18 do that. And we're happy to do that.

19 THE FACILITATOR EHRLICH: If it's
20 possible for you to speak directly to the City on a break
21 about the where and when that kind of thing can happen,
22 it would -- sounds like it would be a helpful thing.

23 MR. JEFF HUMBLE: Jeff Humble, City of
24 Yellowknife. Thank you. Certainly, you know, we
25 appreciate it and we are looking for a partnership on

1 this. We think we -- both parties, we can work together
2 on this.

3 So -- so we look forward to that
4 discussion, and -- and moving forward. Thank you very
5 much.

6 THE FACILITATOR EHRLICH: Mr. Humble, do
7 you have any other questions, or Mr. Kefalas, I see you
8 approaching a microphone. Questions about surface use of
9 the site, and the other stuff that we're covering today,
10 which includes tailings, pits, waste, future land use up
11 to the -- the point with the ex -- with the exception
12 that I've made earlier, and air quality.

13 MR. DENNIS KEFALAS: Dennis Kefalas, City
14 of Yellowknife. Just some clarification on what the
15 Giant team considers its best practice is in terms of the
16 non-hazardous landfill sites, and what will be
17 incorporated as part of their design.

18 THE FACILITATOR EHRLICH: To the Giant
19 team, then; what do you consider best practice with
20 respect to hazardous sites, and what will be incorporated
21 into your design?

22 MS. LISA DYER: Lisa Dyer. Just to
23 clarify, I heard non-hazardous from Dennis, but I heard
24 hazardous from Alan.

25 Are you looking for non-hazardous or

1 hazardous?

2 MR. DENNIS KEFALAS: For this specific
3 question -- Dennis Kefalas -- the non-hazardous sites.

4 MS. LISA DYER: Thank you for that
5 clarification. I'm going to ask Gord Woollett to speak
6 to that.

7 MR. GORDON WOOLLETT: Gordon Woollett.
8 Yeah, the -- as -- in my presentation there was a slide
9 there showing some design concepts that are commonly used
10 in other northern landfill sites.

11 Those would be implemented for this one
12 (1) as well. There is currently no guidelines that will
13 -- for this kind of landfill in the Northwest
14 Territories. There are Federal guidelines, so we're
15 going to be drawing on guidelines and methods for waste
16 disposal from other jurisdictions.

17 MR. DENNIS KEFALAS: Dennis Kefalas, City
18 of Yellowknife. Will you be incorporating the same --
19 the same design standards currently employed by the City
20 of Yellowknife in these landfills?

21 MR. GORDON WOOLLETT: Gordon Woollett.
22 Not knowing how that one (1) is designed, I can't really
23 answer that question at this time.

24 MR. ADRIAN PARADIS: I think the best way
25 -- Adrian Paradis for Giant project team.

1 Dennis, if we can get the standards that
2 you're using, and then we can organize to get that to our
3 design team so they can take it into consideration.

4 MR. DENNIS KEFALAS: Thank you. Dennis
5 Kefalas for the City of Yellowknife. That's good to
6 hear.

7 Just the City of Yellowknife expects that
8 we're setting a standard for the Territories in terms of
9 new generational landfills, which requires the
10 installation of liners and leachate collection systems,
11 even for non-hazardous landfill sites.

12 THE FACILITATOR EHRLICH: I've a question
13 for the City of Yellowknife on that.

14 Are you designing your landfill to
15 maintain its integrity in perpetuity? You know, five
16 thousand (5,000) years from now? I mean, is your
17 landfill expected to -- to last forever, ever, and ever?
18 In other words, I'm trying to figure out if the standards
19 that are appropriated to it also suit a project where --
20 where everything has to keep working for, you know, for -
21 - for millennia.

22 MR. DENNIS KEFALAS: It's Dennis Kefalas,
23 City of Yellowknife. It's safe to say that the standards
24 that we're currently incorporating will perform better or
25 longer than what's being proposed by the existing

1 landfill standards currently used throughout the
2 Territories.

3 And it's something that was initiated by
4 the approval of the Mackenzie Land and Valley Water
5 Board, and we expect that other jurisdictions, as well as
6 the Giant Mine site incorporate these standards.

7 THE FACILITATOR EHRLICH: Mr. Kefalas,
8 I'm -- I'm not casting aspersions on the quality of the
9 City of Yellowknife's landfill. From what you said it
10 sounds like state of the art.

11 I just -- I'm not aware of other
12 perpetuity projects in the Northwest Territories anywhere
13 where the proposed projects that -- that need to keep
14 working forever and -- and -- and a lot of this project,
15 because it's a perpetuity project, you know, its -- its
16 integrity must be maintained forever.

17 So I just wonder if the Giant Team has
18 considered this and might want to come up with standards
19 that are, you know, that -- that match the -- the period
20 that the project is -- is -- is going to be going on for.

21 Unless I've -- I've misunderstood
22 something, and maybe perhaps the Giant Team can respond.

23 MS. LISA DYER: Lisa Dyer. Just to -- to
24 clarify, Dennis, are these standards currently published
25 right now, or where -- where do these standards rest, and

1 where can we see a copy of those?

2 MR. DENNIS KEFALAS: These -- the
3 standard that we actually -- Dennis Kefalas, City of
4 Yellowknife. There's actually a standard currently used
5 in Alberta and it's what was expected of the City in
6 terms of our getting our approval for a new landfill.

7 And we'd hope that the Federal Government
8 and the GNWT would be held to a higher standard than the
9 City of Yellowknife, or at least equal.

10 MS. LISA DYER: Thank you. So you were
11 referring to the Alberta guidelines? That is the
12 standard that you're using?

13 MR. DENNIS KEFALAS: That's the -- Dennis
14 Kefalas, City of Yellowknife. It's the one (1) we've
15 currently employed as part of our landfill.

16 MS. LISA DYER: Okay.

17 MR. DENNIS KEFALAS: And which was
18 accepted by the Mackenzie Valley Land and Water Board.
19 And we would expect that any other landfills that are, I
20 guess, installed and constructed within the boundary of
21 the City of Yellowknife would be at least of that level
22 if not exceeding it.

23

24 (BRIEF PAUSE)

25

1 THE FACILITATOR EHRLICH: It sounds like
2 that's a little bit different from the -- the question
3 that I had for the Giant Team. My question is: If
4 you're designing your project in perpetuity, is your
5 landfill standards appropriate for that?

6

7 (BRIEF PAUSE)

8

9 MR. MARK CRONK: Mark Cronk. Yes, we
10 believe they are. If I may, we would still like to see
11 the City's standard for landfills.

12 THE FACILITATOR EHRLICH: Is the City
13 prepared to commit to -- to submit that standard for the
14 record as a -- a commitment from this technical session?

15 MR. DENNIS KEFALAS: Dennis Kefalas, City
16 of Yellowknife. Absolutely.

17 THE FACILITATOR EHRLICH: Okay. So we'll
18 have that show in the transcript as Commitment number 6,
19 that the City of Yellowknife will share with the Giant
20 Team and the public record its standard that it's
21 employing for its current landfill.

22

23 --- UNDERTAKING NO. 6: City of Yellowknife will
24 share its standard that it's
25 employing for its current

1 landfill.

2

3 THE FACILITATOR EHRLICH: Does anyone
4 else have any questions for the Giant Team?

5 MR. DENNIS KEFALAS: I have one (1) more
6 question. Sorry, Dennis Kefalas, City of Yellowknife.
7 Maybe it's -- considering it's a Giant Mine Team, given
8 the, I guess proposed reclamation projects, I mean, some
9 of the pits won't be -- for various reasons won't be
10 filled, will be left as is, per se.

11 I mean, that really takes a lot of land
12 out of potential use. I'm just wondering if we could get
13 a commitment from the team and a member of the team, I
14 guess at GNWT, that if at such time a -- the bypass
15 highway, or relocation of Highway 4 is actually
16 constructed, that the City would have -- based on the
17 Akaitcho land withdrawal would have the next access to
18 those lands adjacent to the highway, or provided --
19 what's the proper word? Hang on a second.

20

21 (BRIEF PAUSE)

22

23 MR. DENNIS KEFALAS: Excuse me, if we
24 would have first refusal to those lands based on the
25 Akaitcho withdraw?

1 THE FACILITATOR PHILLPOT: Thank you,
2 Dennis. Is there someone with the Giant remediation team
3 who would like to respond to that?

4 DR. RAY CASE: Ray Case, Giant Mine
5 remediation team. The -- I believe the issue that's been
6 raised is a matter between the Government of the
7 Northwest Territories, the City and -- and the Akaitcho
8 Territory, and should be pursued at -- at that juncture.

9 Certainly, the -- the rationale the City
10 has just put forward as -- as to what the outcomes of the
11 -- the Giant Mine remediation and -- and such could be
12 put forward in -- in that context as -- as part of the
13 argument, but we don't see it as -- as a matter that the
14 Giant Mine remediation team would be able to address.

15 THE FACILITATOR EHRLICH: Thank you, Dr.
16 Case. Any other questions for the Giant team?

17 THE FACILITATOR PHILLPOT: Kevin O'Reilly
18 with Alternatives North...?

19 MR. KEVIN O'REILLY: Thanks. Kevin
20 O'Reilly with Alternatives North.

21 Alan, I just wanted to follow up on this
22 discussion about future land use. I understand that the
23 soil rema -- remediation criterion is not part of the
24 assessment, but future land use is. And I would direct
25 you to the terms of reference 3.4.1, item 7, and it reads

1 as follows:

2 "At a minimum, the developer is
3 required to:

4 7. Consider how any aspect of the
5 development may affect present and
6 future land uses in the area, including
7 opportunity costs."

8 So this prior discussion about future land
9 uses I think is quite squarely within the -- the scope of
10 this assessment, and I think that information should be
11 put on the public registry. And they weren't talking
12 about soil criterion, they were talking about future land
13 use.

14 So I just want to get your thoughts about
15 that, if I could, and if the developer wants to comment,
16 they -- they're welcome to do that as well. Thanks.

17 THE FACILITATOR EHRLICH: You're correct,
18 and I apologize if I've been unclear. It's the soil
19 remediation standard that the Board explicitly decided
20 was outside of the scope of the EA. If it's in the terms
21 of reference, for example, future land use and
22 opportunity cost, then it is inside the scope of the
23 environmental assessment, in which case please submit the
24 information to the record as well as to the City
25 directly, so that we can put it on the public registry.

1 But to -- to make it clear, yeah, the
2 residential versus industrial standard, not on. Future
3 land uses and opportunity costs which relate to future
4 forgone, that's -- that's within the scope.

5 MR. KEVIN O'REILLY: Sorry, if I may.
6 Kevin O'Reilly, Alternatives North.

7 I just want to point out, too, that the
8 City did develop a land-use plan for this area. It was
9 filed on the public registry by myself as an individual
10 close to the beginning of the -- the -- this
11 environmental assessment, so that has been on the public
12 registry for at least probably a year and a half, and the
13 developer, I'm sure, is well aware of that document as
14 well. Thanks.

15 THE FACILITATOR PHILLPOT: Thanks, Kevin.
16 Are there any further questions from the City of
17 Yellowknife? If not, we'll open up ques -- open up the
18 floor to questions from other parties.

19 And Alan just put a little bug in my ear
20 to remind all -- everyone in the room that DFO will be
21 leaving at 3:00 p.m., so if there's any questions for
22 DFO, or if DFO has any questions at this time, perhaps we
23 could focus on those. And I see a question from the
24 Review Board's -- one (1) of the Review Board's experts,
25 Dave Tyson.

1 MR. DAVE TYSON: I just wanted to follow
2 up on Baker Creek and fish habitat in Baker Creek. And
3 there's -- DFO has made some comments about the
4 importance of fish habitat in Baker Creek, and I was
5 wondering if they had a -- a regional study that
6 documents the availability and importance of fish
7 habitat, particularly with respect to Arctic Grayling, or
8 are these statements at this point about -- such as may
9 be important grayling habitat just conservative
10 speculation at this point?

11 MS. MORAG MCPHERSON: Morag McPherson,
12 Fisheries and Oceans. Our evaluation to date on habitat
13 in Baker Creek is based on the last five (5) years of
14 studies that have been conducted on the creek, in
15 particular where we have learned a lot more in terms of
16 the actual habitat within the creek on the mine site; had
17 habitat assessment maps put together.

18 Again, this is all stuff actually that the
19 Giant Mine remediation team has done in terms of as part
20 of this environmental assessment, putting together
21 information on the habitat within the creek and fish use.

22 So there has been extensive information
23 gathered, I guess, that has informed our understanding in
24 terms of our assessment of their reports on fish habitat
25 and fish use within the creek itself.

1 So these -- my comments, and our
2 information that we have on the habitat -- on fish use
3 and what actually happens in the creek is based on five
4 (5) -- five (5) years of studies to date.

5 In terms of regionally and the importance,
6 as I mentioned yesterday, that -- that is an unknown.
7 What DFO has done ourselves has done a little bit of
8 reconnaissance and some literature reviews in order to
9 understand where there is other, I guess, seasonal spring
10 spawning Arctic Graying habitat.

11 From a habitat side, where we come from,
12 that's -- that's what we have done, so we have not
13 requested that the Giant Mine team put it into that
14 context in terms of they -- them undertaking a study to
15 determine this importance, because as the project is
16 proposed right now there would be an improvement in
17 habitat, and an increase in habitat quantity and quality.

18 If that was to change, then yes, likely
19 some additional information would be required and
20 additional studies requested, but to date based on what's
21 proposed we didn't feel that was necessary.

22 I think that's all that I will say on
23 that. Thank you.

24 THE FACILITATOR PHILLPOT: Thank you.
25 Dave, do you have a follow-up question?

1 MR. DAVE TYSON: Dave Tyson for the
2 Review Board. I -- I guess, you know, the -- what I'd
3 like to understand is how this is -- you know, there's --
4 there's been comments about regional importance, and you
5 know, the -- the place -- the place that -- that Baker
6 Creek serves in -- in fish productivity in a -- in a
7 regional basis, and what -- and what I'm understanding is
8 that we don't understand this right now. We don't have
9 that sort of information. So we don't know that if --
10 that the habitat currently in Baker Creek is -- is that
11 important. The -- the studies have focussed on Baker
12 Creek basically in isolation.

13 MS. MORAG MCPHERSON: Morag McPherson,
14 Fisheries and Oceans. Yes, we have focussed on Baker
15 Creek, so we know what it does produce.

16 In terms of moving that out into the local
17 study area, I guess if you want to put it in the context
18 of the EA and the regional study area, there hasn't been
19 additional study to understand.

20 It essentially is a black box in terms of
21 the importance of Baker Creek to Arctic Grayling
22 populations in Yellowknife Bay. I think I would stick
23 more now to -- I mean, as I said yesterday, we -- yeah,
24 we don't know -- regionally I guess is the North Slave
25 region, if you're looking at the scope of the assessment;

1 locally it's Yellowknife Bay. And essentially it is --
2 it is unknown but given what we know about the creek, we
3 do know it is -- it produces a lot of Grayling.

4 We don't -- we haven't identified other
5 Arctic Grayling spawning areas in the Bay, so those are
6 the facts we have. We don't know its importance in terms
7 of productivity, or its importance to the Arctic Grayling
8 stocks in Yellowknife Bay.

9 THE FACILITATOR PHILLPOT: Thank you,
10 Morag. Dave, did you have an additional question?

11

12 (BRIEF PAUSE)

13

14 THE FACILITATOR PHILLPOT: Thanks. Then
15 I'll turn to Alan Ehrlich, who has a question.

16 MR. ALAN EHRLICH: I just want to try and
17 understand the -- make sure I -- I get a grip on -- on
18 sort of what you're saying about the regional populations
19 and such.

20 I remember you said before the Beaulieu
21 River was recognized as an important Grayling spawning
22 habitat, but I -- I'm not a fisheries expert, I -- so
23 Grayling aren't spawning up the Yellowknife River, or if
24 they are they're not coming down into the Bay.

25 Is that correct?

1 MS. MORAG MCPHERSON: Morag McPherson,
2 Fisheries and Oceans. Again, this is just based on -- on
3 our reviews of studies and information that we have on
4 fisheries and fish stocks within the Bay.

5 There has been, I guess, observations of
6 Grayling in Yellowknife River, but we -- I have not been
7 able to find to date -- and again, this is something that
8 we have been undertaking as much as we can, but have not
9 put together a focussed study on this yet. But there's
10 been no actual identified spawning sites within
11 Yellowknife River that have been documented in any type
12 of study that we've been able to find.

13 There are different populations of
14 Grayling; not all move into rivers, are adfluvial. Some
15 can spawn and live just within lakes, but again, this is
16 some of the challenges of -- of doing fisheries work in
17 the north, is that we don't have the information, and
18 fisheries management even does not have these -- this
19 information on a lot of the stocks.

20 So in terms of understanding is it one (1)
21 stock or population of Grayling in Yellowknife Bay, or
22 are there several, are they separate, do they overlap, we
23 don't -- we don't know that. We know there's Arctic
24 Grayling that are caught by recreational fishers out near
25 the sub-islands, but are those Grayling that move into

1 Baker Creek? We don't -- we're not sure.

2 They -- they could live and spawn within a
3 lake. There's different sort of life histories that
4 Grayling can have, and -- and we -- we don't have that --
5 there hasn't been population-type work done on the Arctic
6 Grayling. All we know is the habitat that's available
7 and the numbers that come in, what it produces, what
8 moves out when, and we've started to learn a lot more --
9 more about that, but it -- it has not been put into any
10 sort of context of the importance to populations, I
11 guess, yet in the bay.

12 All we know is we have not been able to
13 identify similar seasonal, spring seasonal, Grayling
14 spawning within Yellowknife Bay. We think Yellowknife
15 River likely does provide that. We know from the
16 Yellowknives Dene that the outlet of Duck Lake coming out
17 into Yellowknife Bay on the other side of Dettah has a
18 small sort of riffley (phonetic) run area. It's not very
19 big, but we -- we do understand that Grayling move in
20 there in the spring and spawn.

21 So those are two (2) areas, we know
22 there's others, but in terms of the -- I guess the
23 quantity and the type of habitat, when you look at the
24 channel, does -- the channel structure, the hydrology,
25 there's nothing similar in terms of that. It doesn't

1 mean there's not spawning elsewhere, but this is what we
2 know, based on -- on studies and actual documentation
3 that we've been able to find thus far. But again, there
4 hasn't been a full study done to that -- to that scale.

5 MR. DAVE TYSON: Okay. Thanks.

6 THE FACILITATOR PHILLPOT: Are there any
7 other questions for DFO, City of Yellowknife, who will be
8 leaving shortly, or to other parties?

9

10 (BRIEF PAUSE)

11

12 THE FACILITATOR PHILLPOT: I see a
13 question from Todd Slack, YKDFN.

14 MR. TODD SLACK: Well, I wanted to give
15 the federal folks a -- a chance to get questions in, but
16 it doesn't seem like they have any, so I guess I'll start
17 in on -- unless somebody jumps in here, I'll start in on
18 questions for the project team.

19 THE FACILITATOR EHRLICH: Actually, Todd,
20 I think we -- we will jump in. It's Alan Ehrlich. We
21 are going to jump in for a second, because with DFO
22 disappearing, we want to make sure that any questions
23 that we've got from or for DFO get reached now. Is there
24 anyone who has any other questions for Department of
25 Fisheries and Oceans regarding what we've heard? Because

1 after 3:00 you won't have the opportunity.

2 Is DFO planning on coming back on later
3 days, on -- on Thursday and Friday?

4 MS. MORAG MCPHERSON: Yes, we are going
5 to be available tomorrow and Friday; we're here all day.
6 It's just today we're leaving at 3:00. Thank you. Morag
7 McPherson.

8 THE FACILITATOR EHRLICH: It's Alan
9 Ehrlich again. Okay, that's good. That's not as dire as
10 I -- as I thought it was going to be. Okay.

11 Kevin, do you have a question for
12 Fisheries and Oceans?

13 MR. KEVIN O'REILLY: Sure. Kevin
14 O'Reilly, Alternatives North. And I -- I did give Morag
15 a -- a heads up that I might ask this question. So given
16 what we know now about the diffuser design and the -- the
17 mixing zone, is DFO going to require Fisheries
18 authorization? And if you can't answer it because you
19 don't know enough about the design, that's fine. I just
20 want to know what you think about it at this point.
21 Thanks.

22 MS. MORAG MCPHERSON: Morag McPherson,
23 Fisheries and Oceans. Sorry, maybe I shouldn't have
24 mentioned I was leaving. We're bringing up -- we're
25 bringing up topic creep into the surface stuff. Sorry.

1 Yeah, in response to that, we had
2 indicated in both our letter to the Board on the scoping
3 that that was an area that we had indicated there may be
4 impacts to fish and fish habitat from the construction of
5 the diffuser.

6 Also in response to I think it was
7 Yellowknives Dene IR-26, when it was wanting to get a
8 little bit more clarity on departments' involvements in
9 certain technical aspects of the project, we did indicate
10 there as well that it is an aspect of the project where
11 we've identified there are likely to be some impacts to
12 fish and fish habitat, but, as you mentioned, we don't
13 have all of the design details yet. We -- we just got
14 some of that information this week as well.

15 So there hasn't been a determination made,
16 but it is something that will continue to be reviewed
17 through this EA, which will inform any regulatory
18 decisions we have to make as well. So there hasn't been
19 a determination yet.

20 THE FACILITATOR PHILLPOT: Thank you,
21 Morag. Did you have a follow-up question, Kevin?

22 MR. KEVIN O'REILLY: Thanks, Kevin
23 O'Reilly, Alternatives North. Not a follow-up question,
24 but I did want to thank DFO for being here. They asked
25 really good questions. They helped us certainly

1 understand some of the issues a lot better.

2 So I did really want to thank them for
3 being here.

4 THE FACILITATOR PHILLPOT: Thanks, DFO.
5 So just to remind everyone, we need to bring back the --
6 the focus of the questions to the surface remediation
7 which is the topic for today.

8 And if there are no further questions for
9 DFO, we'll turn to YKDFN who indicated they had a
10 question for the developer.

11 MR. LUKAS NOVY: Lukas Novy here. I'm
12 just going to steal the mic from Todd so I can get a
13 couple of words in. And it's related to basically with
14 the water pits and it's specific IRs on YKDFN number 3
15 and number 5. So I'll just provide some background with
16 what was said in those and then pose a question and there
17 most likely will be a follow-up question to it, so.

18 IR number 3 primarily revolved around
19 getting some historical feedback on the overall process
20 of selecting the closure option for the open pits. And
21 with that there was provided some information on that.

22 And I'll just look here for reference. It
23 was indicated that the -- the operation of allowing the
24 pits -- pits to flood would produce contaminated lakes,
25 and that was indicated as a reason for not going with

1 open pits, and additionally it was stated that it could
2 cause drowning due to usage, public usage of it in a
3 swimming set up, or whatever -- what -- whatever scenario
4 was indicated, there could be drowning.

5 That is in a bit of confliction with IR
6 number 5, which revolved around what type of monitoring
7 activities would be possess -- would be done for the open
8 pits. And there's a statement on the Mine Site
9 Reclamation Guidelines for the Northwest Territories.

10 And the point of confusion is -- is that
11 some statements are made on the post -- post-closure
12 monitoring and it's discussing lakes, water being formed
13 in the lakes, water levels, and that's -- that's kind of
14 pushing it that there would be some formation of -- of
15 lakes or some sort of water inside the pits and it's
16 directly in -- it doesn't really correlate well to IR
17 number 3.

18 And secondly, the main reasoning for
19 disapproving the formation of lakes, so it's -- it's
20 indicated flooding of the Giant Mine pits is not
21 practical because of the inner connections with the
22 underground workings.

23 Now it's a different reason that was
24 provided for IR number 3. So first off the bat I would
25 like to have some clarification on what was the main

1 reasoning for open pits -- or I guess first off, I would
2 like to know is there any commitment to whether open pit
3 lakes will be formed at any point in time during the
4 project?

5 THE FACILITATOR PHILLPOT: Thank you,
6 Lukas Novy. To the Giant Remediation Team, they're
7 looking for a commitment about formation of open pit
8 lakes at any time during the project.

9

10 (BRIEF PAUSE)

11

12 MR. ADRIAN PARADIS: Adrian Paradis for
13 INAC. We're just going to ask that Bruce Halbert respond
14 and then Daryl Hockley will provide some clarifications.

15 MR. BRUCE HALBERT: Bruce Halbert.
16 You've got a number of questions there so I'll try to
17 break it out then hopefully Daryl can fill the holes.
18 One (1) is flooding the pits. You can't flood the pits
19 without the -- the underground mine workings also being
20 flooded because there are inner connections. So from a -
21 - just from a practical point of view that's not an
22 option, unless, of course, we're gonna allow the -- the
23 mine wat -- the -- the mine to flood itself eventually.

24 That's not contemplated within the --
25 within the DAR. Our expectation is that we're going to

1 have to treat water -- minewater for quite some time to
2 get the quality of the -- the water down to a point where
3 one could even contemplate allowing it to rise and flood
4 the pits, and that's, who knows, way out in the future.
5 So I think I'll stop at that and I'll turn it over to
6 Daryl.

7 MR. DARYL HOCKLEY: Yeah, I just wanted
8 to clarify the -- there's confusion, I think, and I can
9 maybe -- since I didn't write this but I did review this
10 particular response, so I can tell you what people had in
11 mind when they wrote them, and -- and that might explain
12 the confusion.

13 The -- the statement in IR Number 3 that
14 the flooded pits were evaluated, and -- and ruled out
15 because of water quality concerns is -- is similar to
16 what -- what Bruce just said.

17 As water can flow into the mine from the
18 pits, water could also flow out of the mine into the
19 pits, and that would be contaminated water. So it's
20 really just expressing the same thought in -- in two (2)
21 confusingly different ways, I guess, is what happened
22 there.

23 The -- the references to the -- to the
24 guidelines -- mine site reclamation guidelines, I -- I
25 distinctly remember reading this, and -- and seeing the

1 same potential for a confusion.

2 The -- the -- what we could have done, I
3 guess, would have -- to have been to strike all
4 references to flood the pit, but then we would be saying
5 the right -- the - - the guidelines say this when they --
6 and leaving out -- we would have been implying if you
7 like that the guidelines don't provide for flooded pits
8 when in fact they do.

9 So it was an issue of trying to be -- give
10 a complete representation of what the guidelines said
11 that we left those references in there, but there is no
12 intention to have flooded pits in the -- in the current
13 remediation plan.

14 THE FACILITATOR PHILLPOT: Thank you.
15 Any further questions from Lukas Novy?

16 MR. LUKAS NOVY: Yeah. And so it's a
17 follow-up question to that, as -- as I know that there's
18 -- there's some channel diversions that are being
19 proposed, and my understanding of that is, is to
20 eliminate the potential of -- of water coming into the
21 open pits.

22 I -- I'm just wondering what -- what other
23 contingencies or mea -- measures -- if I could just get a
24 summary of measures that are being in place to prevent
25 that, and how -- how that -- was it the overall -- the

1 overall lack, or thing I'm missing here, is the overall
2 process of how the open pits were selected as the option
3 in -- instead of filling the open pits.

4 Because my concern is, is that the -- the
5 main risk to that in its current state is, is that water
6 gets in there and could come into the underground
7 workings.

8 So I -- I just didn't see that linkage
9 between the underground, and -- and the potential for
10 water influx. So I'm kind of maybe going off track here,
11 so maybe the first question is, is just: Currently, how
12 is water being prevented from entering -- entering the
13 open pits?

14 THE FACILITATOR PHILLPOT: Thank you,
15 Lukas. Lisa Dyer, did you want to take that one, or
16 indicate who from your team will?

17 MS. LISA DYER: Lisa Dyer. I think I'll
18 ask Mark Cronk to talk about current measures, and then
19 we'll talk -- ask Daryl Hockley to speak to the second
20 part, which I'm trying to remember what it is at this
21 moment in time, and I'm having a total mind blank. Why
22 we're not filling the pits. Yeah.

23 MR. LUKAS NOVY: Before you guys get
24 going, and it would be in the -- in the basis of water
25 management and risk to the underground, is whether it's

1 filling pits or not. Lukas Novy.

2

3

(BRIEF PAUSE)

4

5 MR. MARK CRONK: Mark Cronk. Lukas, if I
6 understand your question, what steps are we taking to
7 manage the risk of water infiltration to the pits on
8 surface?

9 MR. LUKAS NOVY: At this current time,
10 yes.

11 MR. MARK CRONK: One (1) more
12 clarification. Is that during the pre-implementation
13 phase, or as part of the implementation project?

14 MR. LUKAS NOVY: I guess the
15 implementation of, in terms of time scale, would be
16 preferable in -- in the frozen blocks, and at their
17 various stages, so. And that's the time I'm looking for.
18 It's for the ten (10) year designated target for the
19 frozen blocks, I want to know.

20 MR. MARK CRONK: Mark Cronk. As Nathan
21 Schmidt presented in his Baker Creek and surface water,
22 almost all of the work we will do is improvements to the
23 channelization, flood plains, lifting the banks,
24 improving the hydraulic capacity of Baker Creek
25 travelling through the site.

1 Does that answer your question?

2 MR. LUKAS NOVY: Yeah, it does. It's
3 just that the -- the main -- I guess that's the nice
4 segue into the second question. I don't see the -- the
5 evaluation of how does that compare to filling the pits
6 in, in terms of cost, in terms of is -- is one (1) more
7 dominate?

8 Because I know that we're talking about
9 channel diversion, and -- and I just don't have an
10 understanding, and I didn't see that in the description
11 of -- that that was even considered as the option.

12 Basically the -- the filling of the pits
13 were disapproved that some other area would be a creation
14 of an open pit lake, and -- and it was said that that's
15 not a reasonable thing.

16 But the -- what didn't come across the --
17 the actually filling of the pits could mediate a risk, so
18 I'm just trying to get some information on, How does it
19 compare to the diversion of channels?

20 Is it -- is it much more expensive, or --
21 and any other technical information that could provide
22 guidance on that.

23 MR. DARYL HOCKLEY: I think -- I think we
24 just need to back up a step. Daryl Hockley. The -- the
25 fundamental hazzard is the arsenic trioxide dust. Baker

1 Creek represents a risk insofar as it can flood the mine,
2 pick up that arsenic trioxide dust and take it out into
3 the creek. Okay.

4 Our -- our fundamental approach to
5 managing that hazard and that risk is the frozen block.
6 We freeze the arsenic trioxide, we significantly reduce
7 all risks associated with flooding from Baker Creek; that
8 -- that's the fundamental approach here, okay.

9 In the intervening period there are issues
10 about Baker Creek representing a risk and there is still
11 some risk after the frozen block, depending on how much
12 arsenic is in the underground, et cetera, et cetera. But
13 the -- the fundamental approach to this has been the
14 frozen blocks. Okay.

15 So to the question, once the frozen blocks
16 are in place, which is the -- the proposal, would we then
17 backfill pits in order to prevent the creek infiltrating
18 the mine. I suppose it's one (1) of the mitigation
19 measures that -- that should be considered. It -- it may
20 be cost wise, or risk wise reasonable. I -- I don't
21 know.

22 We -- we didn't think in those terms, I
23 can tell you that, because we -- we feel that once the
24 arsenic blocks are frozen, the significant risks
25 associated with Baker Creek are mitigated. And at that

1 point it becomes a question of what to do with the rest
2 of the site and plans to -- the -- the DAR talks about
3 other options for the pit that were considered in that
4 context, right, under the assumption the big hazzard had
5 been mitigated.

6 So that -- that's the answer to your
7 question, what was the logic that was followed in the
8 process of the DAR.

9 MR. LUKAS NOVY: Yeah, that -- that
10 raises -- you -- you outlined the scenario post-freezing
11 of the blocks, but I -- I was more concerned, or the
12 question was in -- in its current state that you -- there
13 is -- there is an opportunity to eliminate that potential
14 for water by -- by filling the pits -- by providing a
15 backfilling at this current time, or -- or before the --
16 before the freezing is complete?

17 MR. DARYL HOCKLEY: I'm not sure that --
18 first of all, I'm not sure that backfilling the pits with
19 any of the available material would actually solve the
20 problem. The -- the -- we don't have a lot of fine grain
21 low point building material available and we -- and --
22 and we probably don't want to stuff it all in pits
23 because we need it for more high value uses like tailings
24 covers.

25 So what we'd be putting in those pits is

1 broken rock and broken rock won't stop the infiltration
2 of water in any case, right. Yeah.

3 Sorry, I had a -- oh, yeah, another point
4 I wanted to make is that John Hull's presentation did
5 mention many cases where we are partially filling pits or
6 stabilizing the edges of pits and that those are largely
7 directed towards making sure the creek stays out of the
8 pit.

9 So they're not -- they're perhaps not what
10 you're thinking of in terms of a total backfill, but --
11 but options to stabilize the channel by -- by modifying
12 the pit is certainly -- are in consideration in the
13 design now.

14 MR. LUKAS NOVY: Okay. I just have one -
15 - I -- one final question on that. It's -- and I wanted
16 to focus primarily on -- on the technical validity of --
17 of doing it that way, and -- and the majority of my
18 questions are answered.

19 But I just wanted to bring up that
20 additional point that the future land use that has been
21 discussed, that's -- that's another positive benefit that
22 I didn't see in -- in the -- in -- accounted for with the
23 open pits. If they are filled up, it does -- it does
24 possess less risk to that.

25 And -- and I guess I'm just wondering if

1 that was accounted for in the overall selection of
2 keeping -- keeping the open pits as they are and just
3 providing fencing and what other type of closure
4 strategy.

5

6 (BRIEF PAUSE)

7

8 MR. MARK CRONK: Mark Cronk. We do
9 appreciate that leaving the open pits as part of the
10 remediation plan will produce some restrictions on the
11 property.

12 The Yellowknife environment doesn't have a
13 large inventory of borrow material that it can use to
14 fill those pits, and, in essence, we would have to create
15 another hole of equal size to generate that material to
16 fill those pits. And so we accept that there is a
17 restriction on the land use because of those pits.
18 That's the best answer I can give you at this point.

19 MR. LUKAS NOVY: Lukas Novy. Thank you
20 very much, Mark.

21 THE FACILITATOR PHILLPOT: Lukas Novy, do
22 you have any further questions for the developer or for
23 any other parties?

24 MR. LUKAS NOVY: Not at this time,
25 thanks.

1 THE FACILITATOR PHILLPOT: Then we have a
2 question from Lukas, one (1) of the technical experts
3 with the Review Board, Lukas Arenson.

4 MR. LUKAS ARENSON: Lukas Arenson from --
5 from the Review Board. I have two (2) or three (3)
6 questions. We'll -- we'll see, I guess, with respect to
7 the tailings and their long-term behaviour, and it's
8 basically as a followup on the Review Board IR Number 10,
9 where we're asking for the long-term behaviour and -- and
10 mainly the settlement. What are the expected settlement?
11 We heard this morning in the -- in the presentation that
12 minor settlements, consolidation settlements are
13 expected.

14 The answer in the IR was that Golder is
15 currently, I think, conducting an additional study on how
16 the long-term behaviour of the tailings is, and I was
17 just wondering what's the current status. Can you
18 comment on what's going on, and, based on that, I'll see
19 if I've got more questions. Thank you.

20 THE FACILITATOR PHILLPOT: Thank you,
21 Lukas Arenson. Adrian Paradis...?

22 MR. ADRIAN PARADIS: We're just going to
23 ask John Hull and to let him to review the material here
24 briefly, and he'll respond. Just give us a moment.

25 THE FACILITATOR PHILLPOT: Thanks,

1 Adrian. We'll just take a moment for that.

2

3

(BRIEF PAUSE)

4

5 MR. JOHN HULL: John Hull in responding
6 to the question of settlements and the consolidation.

7 The expectation is that, in the area at
8 the North pond, there would -- because of the regrading,
9 there will be settlements. Drilling indicated that the
10 area where there's presently water, there may be higher
11 settlements than in the surrounding area.

12 A large part of the surrounding area would
13 be unloading, because we would move the tails to that
14 area of the North pond. The anticipation is, in the
15 sequencing, we would leave several years before final
16 grading to accommodate for some of the settlement.

17 The drilling also indicated that the
18 thickness of the settlements or soft settlements in the
19 North pond area is fairly shallow, so it's a limited
20 amount of settlements. We are also concerned with regard
21 to permafrost or zones of discontinuous permafrost, which
22 we know are in some of the tailings ponds area,
23 specifically in the Central and part of the North pond.

24 We would again anticipate, because of --
25 with sequencing and regrading, that that area would be

1 left for a short time before final grading and final
2 cover, to allow for that to liquiverate (phonetic). As I
3 also noted, there will be, in a short term after the
4 cover's placed, an anticipation of some settlements, and
5 some maintenance will be required to make sure that the
6 grading and contouring still directs all surface water to
7 a central or system of ditches and then to a spillway off
8 the North pond into the offsite area.

9 MR. LUKAS ARENSON: Thank you, sir.
10 Yeah, that -- that answers, I think, my question. And if
11 I can rephrase it, so there's basically no additional
12 calculations or estimates done in terms of what, for
13 example, thaw consider -- because you're saying in the
14 next couple of years or long term. When I looked at the
15 -- the temperatures, as you said, in Central pond where
16 you expect permafrost, this could potentially stay there
17 for another hundred years that you still have permafrost
18 down there with the cover and -- and so on.

19 So -- so it's -- is it correct to say that
20 this is all still under investigation, and you just wait
21 and basically adjust your cover based on what's going on
22 over the next long term, being it ten (10), twenty-five
23 (25) years?

24 MR. JOHN HULL: John Hull. That's a fair
25 comment, given that there's also the -- the potential for

1 having a part of a landfill on the Central pond.

2 I'm not sure of what final grading and
3 loading would be in that area. We would anticipate that,
4 if some of the Central pond does have a landfill, that
5 will cause settlements within tailings. There'll be some
6 settlement and readjustment of the landfill material as
7 it's placed, so it is going to be an ongoing process.

8 There is no detailed additional
9 calculations that have been made since the DAR was
10 submitted or the responses were prepared, but there would
11 have to be as we move into -- to detail design in the
12 next phase.

13 MR. LUKAS ARENSON: Thank you. And --
14 and I ex -- we're probably going to talk on Friday about
15 that, but I assume it's part of ongoing monitoring, and
16 see how -- how everything behaves. I -- I see.

17 MR. JOHN HULL: Yeah, one (1) of the keys
18 as I noted, that there would be the requirement -- John
19 Hull -- keys would be -- keys would be ongoing
20 monitoring.

21 We would anticipate from previous
22 experience that in tailings -- covering and closing
23 tailings ponds, there's an initial period of several
24 years, three (3) to five (5), where there's additional
25 maintenance just because it's re-establishing and the

1 settlements are working -- working out.

2 And the -- most of the settlement occurs
3 in that short time, and then after that the maintenance
4 and monitoring would -- would decrease. But, yes, it is
5 part of the anticipated program.

6 MR. LUKAS ARENSEN: Lukas Arenson, thank
7 you.

8 THE FACILITATOR PHILLPOT: Thank you,
9 Lukas. Are there any further questions from the parties?
10 I see a question YKDFN, Todd Slack, please go ahead.

11 MR. TODD SLACK: Todd Slack, YKDFN.
12 Thanks, Darha, and I'm not quite as capable as the -- the
13 other parties in organizing my questions into a -- a
14 package here.

15 So I'll start with -- with my favourite
16 topic, evaluating success - targets. I don't know why I
17 ask the same question and expect different responses.
18 There's something about that -- there's a cliché there
19 that I know what it is, but I don't want to think about
20 it.

21 So perhaps in terms of Information Request
22 Number 4, for the Yellowknives, talking about the B1
23 cover, and what the pro -- what the objective of this
24 cover is.

25 So, this cover talks about reducing

1 infiltration and providing physical separation. Now, in
2 terms of success, as -- the criteria for succ -- success
3 in this, in this component, I'm not talking about the
4 whole project, I'm not talking about twenty-five (25)
5 years down the road. I'm talking about why it's being
6 built at this point in time. So physical separation.
7 Yeah, you -- that should -- shouldn't be a problem in
8 terms of meeting that criteria.

9 But when you talk about establishing
10 vegetation in part -- in response 'B' at -- where did I
11 see that -- plans for monitoring vegetation success, and
12 I'm not talking about the monitoring, but obviously
13 vegetation success is a criteria and in response A it
14 talks about infiltration.

15 So, for this component can we get an
16 example of what the metrics for success, in terms of
17 this, what is this cover design to do? How will we know
18 if it's working?

19 THE FACILITATOR PHILLPOT: Thank you, Todd
20 Slack. I will turn to Lisa Dyer to respond to that
21 question.

22 MS. LISA DYER: Thank you, Todd. I'm
23 going to ask John Hull -- we're just going to pass around
24 the room now. I'm going to ask John Hull to speak to
25 measurements of success for the tailings cover.

1 MR. JOHN HULL: John Hull. Request
2 clarification on the question. I think you asked for
3 just specifically B1 Pit or just the general tailings
4 area. Just before -- if it's B1, which is the -- the
5 main open pit which is over the arsenic stope 208 and
6 214, or beside it, that's backfilled and then created
7 with a -- essentially, a gravel cover to allow for the
8 installation of the freeze pipes around those arsenic
9 chambers.

10 And there's no expectation on that B1 Pit
11 cover that there would be vegetation because that would
12 be a gravelled area to allow access for the freeze
13 program ongoing monitoring and maintenance -- maintenance
14 of the freeze system.

15 The tailings areas, the intent is to --
16 for the tailings covers to isolate the -- the areas, and
17 prevent contact with the tailings and the arsenic from
18 the environment and any contact, and just by placing a
19 cover on it, there's a reduction of infiltration into the
20 underground because there's more runoff and it's more
21 efficient.

22 I hope that tries to answer your question.

23 MR. TODD SLACK: Todd Slack, YKDFN. It -
24 - it doesn't. It further complicates the question, and I
25 -- I had chosen B1 as a very specific example in this

1 Information Request because it does mention that part of
2 the cover -- sorry.

3 Regardless, Information Request gives you
4 -- does not coincide with what you've just described, but
5 let's focus on the tailings cover that you -- you
6 mentioned, and I'm just trying to use a very specific
7 example to establish some metrics of success for both the
8 parties and the inspectors and the boards to know how to
9 evaluate whether this is -- this has been successful or
10 not.

11 So when you talk about the tailings cover
12 and you're talking about reducing the infiltration, by
13 how much is the goal of reducing infiltration?

14

15 (BRIEF PAUSE)

16

17 MR. JOHN HULL: John Hull. The tailings
18 cover, the anticipation is that with the vegetation
19 and/or the final cover that's placed, there would be a
20 significant portion of any precipitation or snow melt
21 would run off the -- that area and would not infiltrate.

22 The percentage that would be evaluated in
23 future studies, we haven't gotten to identifying what --
24 what that would be, but there's -- definitely with the
25 runoff, which would be non-contact water, it would be

1 reduced from what it is today.

2 The measure of success for a cover or
3 vegetation, again, that would be something that would be
4 identified as we move forward into the next phases.

5 MR. ADRIAN PARADIS: Adrian Paradis, for
6 INAC. If I can continue on John's line of response
7 there.

8 One (1) of the specific -- one (1) of the
9 specific things that we'd actually like the YKDFN to
10 comment on or provide us guidance on, or other parties
11 too, is on the re-vegetation of the covers.

12 We've heard going into various community
13 sessions a wide range of opinions on the use of
14 vegetation or the non-use of vegetation on the covers.
15 So one (1) of the things we need from the party -- need
16 from the parties is an actual understanding of what that
17 expectation is.

18 Do you want vegetation on the tailings cap
19 covers or would you prefer a hard cap cover?

20 MR. TODD SLACK: The -- that's a matter
21 to go back to the community and is a matter for a
22 consultation. Ju -- ju -- you know, I can't speak on
23 behalf of the community on this particular question.

24 So I'm -- the reason that I'm focussing on
25 this -- and, you know, I respect when you say there --

1 there'll be a significant change. And I'm going to use a
2 phrase from the mine closure workshop. I forget the --
3 the fellow's name that talked about it.

4 And he said, Well, when the fox is
5 guarding the henhouse, you better keep a close eye on the
6 fox. And in this case, the fox is guarding the henhouse
7 because it's INAC that is the -- the Minister that issues
8 the permit. It is INAC -- the Minister of INAC that
9 appoints the members to the Board. It is INAC that
10 facilitating the work. And it is INAC doing the
11 inspections.

12 So, from my point of view, I think that we
13 need to have very clear targets in terms of what the ini
14 -- or very clear initial targets in terms of what this
15 remediation plan is trying to achieve.

16 When we look at the objectives there --
17 there's five (5) principle objectives in Section 1.21.
18 They're very broad and they don't lend themselves to
19 discreet evaluations of -- of the work that's
20 undertaking.

21 So when we get into, will there be a
22 significant change our two (2) interpretations of
23 "significant" might be different, and we have to remove
24 tho -- that -- the large possible discretion that could
25 happen ahead of time, not after the project has been

1 implemented; otherwise, problems can occur.

2 And this isn't to do with the depth of
3 management. That comes after. But there has to be
4 something at the start.

5 THE FACILITATOR PHILLPOT: Thanks, Todd.
6 Did you have a specific question there that you want them
7 to answer?

8 MR. TODD SLACK: No, because like I -- I
9 tried to get at it, but there -- there isn't -- I can't
10 phrase it any better -- or different maybe.

11 MR. LUKAS NOVY: Lucas Novy. I just had
12 a bit of a followup to what Todd's asking. And maybe
13 what I would like to know is, is where in the design
14 process would -- because it was stated that the
15 objectives or criteria for infiltration would be later
16 on, and I -- I just have a hard time seeing from -- is --
17 where in the design process is this criteria going to be
18 acknowledged and how's the design going to be able to
19 accommodate this value, because it's not something that
20 should come out at the end of design where -- and
21 specifically to cover -- I know that it was stated for
22 the B1 Pit, but the research -- there is trial pads set
23 up, so there should be an idea of infiltration and
24 settlement and that should be tying into the design prior
25 to it going into full design.

1 Adrian, and we'll turn to Mark Cronk, but I'll remind
2 that the question was: Where in the design process would
3 the criteria be identified and how -- how would the
4 design accommodate the targets that are eventually set.

5 So if you could also try to -- to respond
6 to the question that was put to you. Thank you.

7

8 (BRIEF PAUSE)

9

10 THE FACILITATOR PHILLPOT: The criteria
11 for tailings. Do you want to just repeat that, Lukas
12 Novy?

13 MR. LUKAS NOVY: Lukas Novy here. Yeah,
14 we can just keep it to cover systems so that there's B1
15 and -- and also the tailings if -- if Mark's going to go
16 into detail for the design of cover and whatever else he
17 likes to talk about.

18 MR. MARK CRONK: Mark Cronk here. Lukas,
19 I'm not sure I'm going to be able to answer your question
20 right now, but I'm going to work towards it. So if you
21 and I together can keep chasing it.

22 The design team is very early on. We are
23 in what we refer to as preliminary design. As John said,
24 the tailings covers are designed to reduce infiltration,
25 but their primary objective is to separate the tailings

1 from people, if you will, on surface.

2 On the performance criteria that's been
3 asked about is not something that we've attempted to do
4 yet. We've heard some discussions earlier on this week
5 that the project team is interested in having a dialogue
6 about how the environmental monitoring systems would look
7 like and how we would go about doing them.

8 I think you're starting to touch on some
9 of that. John Hull, if there's anything you think you
10 can add to that discussion.

11 MR. JOHN HULL: John Hull, that covers
12 the -- the present state of where we're at.

13 MR. ALAN EHRLICH: I'm going to remind
14 the Giant Team again of something that came up yesterday.
15 With respect to measuring success or figuring out the
16 criteria to take certain actions with respect to your
17 adaptive management framework.

18 From the Review Board's perspective, we
19 need enough on the record to understand if this is likely
20 to cause significant adverse environmental effects, and,
21 you know, what kind of risks are involved. That doesn't
22 necessarily need to be a strict quantitative detailed
23 account, but at least a clear qualitative normative model
24 would be useful so that -- so that it's -- it's clear how
25 to -- that -- that you will be able to understand if

1 something is going wrong and what you will be able to do
2 if you find out that something is going wrong.

3 And the timing of that is important,
4 because the Board needs to understand that during the
5 course of the assessment, the very detailed quantitative
6 stuff can -- can likely happily wait for the regulatory
7 processes, so long as findings of impact significance are
8 not -- are not likely to hinge on them.

9

10 (BRIEF PAUSE)

11

12 THE FACILITATOR PHILLPOT: We're a little
13 bit past the time that we'd indicated we'd have a break,
14 so I think we'll call for a break right now. If everyone
15 can be back in about ten (10) minutes, we'll reconvene at
16 that time and I think YKDFN had indicated they have
17 another question, so we'll start with them after the
18 break.

19

20 --- Upon recessing at 2:52 p.m.

21 --- Upon resuming at 3:08 p.m.

22

23 THE FACILITATOR PHILLPOT: Okay. We're
24 going to resume. Before the break, we had another
25 question, I know from YKDFN, and, subsequently, I have an

1 indication that the developer also wants to say a few
2 more words. And so, if there's any other questions or
3 comments on the subject of the tailings cover, let's deal
4 with those questions at this time.

5 So I'll just turn to YKDFN for their
6 question before moving on to Mark Cronk, who had a few
7 comments to make.

8 MR. TODD SLACK: Okay. I think I can go
9 first, but I -- I don't want necessarily to stomp on what
10 you were going to say there -- or steamroll is a better
11 way to put it.

12 MR. MARK CRONK: If I may?

13 MR. TODD SLACK: Sure.

14 MR. MARK CRONK: Mark Cronk. Todd, to
15 try to put some clarity on to the question you asked, I
16 think it's important to separate the tailings covers and
17 their performance into two (2) aspects. I'm going to
18 deal with the more purely technical, measurable aspect,
19 and then I'm going to go to Lisa Dyer for the others.

20 From the perspective of the tailings'
21 performance aspect, it was mentioned in the presentation
22 that the tailings will shed water. We're going to
23 measure the quality of that water. If it's not compliant
24 discharge, we will send it underground and it will become
25 part of the general minewater and report to the treatment

1 plant.

2 At such point in time as that water cleans
3 up and the covers stabilize, then we will be putting that
4 surface water into the receiving environment directly and
5 continue to monitor it.

6 In terms of the physical protection aspect
7 of isolating the tailings, that is a different
8 performance criteria. At this point, I'm going to turn
9 it over to Lisa Dyer.

10 MS. LISA DYER: Lisa Dyer, for the
11 record.

12 Todd, I think you brought this up several
13 times in the last few days, and I -- and I just want to
14 acknowledge that -- that we've heard it. You -- you're
15 talking about success. What is the success of the
16 remediation plan? How do we determine that? And how do
17 we assure that -- that parties and residents of -- of the
18 communities around the Giant Mine site have confidence in
19 that? And that's a really important issue, and I don't
20 want to lose the importance of that. We've heard that
21 several times.

22 We've talked about the fact that we're at
23 the beginning of design, and that we will be moving
24 towards detailed design. I see that there's an
25 opportunity to establish what success is, not just from

1 the government's perspective, but also from those parties
2 to the EA. And so I don't want to lose this aspect of
3 success, but I really would like to hear from the
4 parties, because I think this is such an important issue,
5 because confidence in this project is very important to
6 us, that -- that the community is confident that we are
7 taking the appropriate measures and hearing what people
8 are saying.

9 So I really want to throw this out, and I
10 don't know if I can ask the parties questions, but my
11 question is:

12 What do you guys -- we can come up with
13 targets and -- but does that necessarily give you
14 confidence of success? What are you looking for to feel
15 more confident in this process, and what can we do?

16 And -- and I -- I really would like to
17 hear from all the parties, because, to me, this is an
18 important issue that we really need to spend some time
19 and focus on.

20 MR. TODD SLACK: Todd Slack, YKDFN. And
21 while I'll speak to Mark first just because I think
22 that's really short.

23 And so, yeah, when -- when the cover sheds
24 this water and it's -- the water is monitored and what
25 happens to that? That's part of the -- the management

1 system and it's not part of the initial targets for
2 success. So I -- I'm trying to decompilate (phonetic)
3 these two (2) issues -- if that's a word. So the
4 monitoring and the adaptive management, that is one (1)
5 issue and that comes after the initial success, in my
6 mind. And so I'm just going to try and explain how I see
7 the success -- or, the initial targets for success.

8 And so I know what the worry is here: The
9 worry is that if initial targets are proposed -- like, so
10 yesterday we heard there was -- and I -- I'm not trying
11 to complete days, but there was three (3) targets
12 mentioned, three (3) principle contaminants of concern
13 for water quality, and one (1) of them was point two (.2)
14 for arsenic.

15 And I'll -- I'll just use that one as the
16 example. And the worry is that if you guys propose
17 point two (.2), we're going to say, Well, no, you can do
18 better. But point two (.2) is the -- the CCME -- and
19 this is a remediation project, so I -- I can't see why --
20 now, I'm -- I have to take -- you know, we all have to
21 take these things back. But I -- I would certainly be
22 recommending that that be accepted as the -- the target
23 for success in that case. I cannot promise that that
24 would be it for all things, that we wouldn't recommend
25 more stringent measures in some cases.

1 But that initial target for success has to
2 be open and in the EA process, in my mind because the
3 whole point of this project is the remediation and so
4 what that remediation is has to be measurable in some
5 way.

6 To -- as we were talking over there I
7 mentioned Section 1.21, the purpose and objectives that -
8 - that is laid out for this project. These are very
9 broad, qualitative statements that are very difficult to
10 -- for all parties to agree on in terms of wheth --
11 whether have been met or not, and not all criteria needs
12 to be established at the EA phase.

13 You know, we accept that the -- the
14 regulatory phase is the place for a lot of this stuff.
15 But for these big issues, like, is the frozen block
16 frozen? Is -- is it -- is it established? What is the
17 water quality coming out of the mine?

18 What is the land remediation standard?
19 Now that's a good example because it's set. That --
20 that is a measurable criteria in terms of success, just
21 as an example. And we have -- we have very good exam --
22 examples of this with the BHP and the Diavik interim
23 closure plans.

24 Now in those cases those weren't
25 considered at EA: 1) I think because the evolution of the

1 processes and the parties hadn't evolved to this point.
2 But for this project, because that is the whole project
3 more or less, because of the nature of the mixed mandate,
4 this has to be explicitly stated for a number of
5 different components and those criteria have to be
6 established in the EA stage.

7 Now I'm happy to clarify that -- like, you
8 know, this is a two (2) way exchange. So if there's any,
9 sort of, further questions, I'm happy to go on at length
10 I'm sure.

11 MS. LISA DYER: Thanks, Todd. Just for -
12 - Lisa Dyer. Just for clarification, my understanding
13 is, kind of, those criteria or measurements of success
14 were done in consultation with interested parties.

15 And is that correct, that there -- there
16 was a process in place that allowed people to have
17 discussions and input in that?

18 MR. TODD SLACK: Yeah, and that's
19 correct. But there was a starting point associated with
20 that process as well. The -- the initial proposal was
21 done up and from there it's -- that's when the engagement
22 process starts. And I'm not saying that should be
23 delayed any more than necessary in order to establish
24 these targets, but there has to be something on the ta --
25 some position from which to work from.

1 MS. LISA DYER: Excellent. Thank you for
2 that clarification.

3 THE FACILITATOR EHRLICH: Any other
4 questions for the Giant team? Kevin, would you like to
5 weigh in?

6 MR. KEVIN O'REILLY: I would like to
7 weigh in. Thanks. Kevin O'Reilly, Alternatives North.
8 I just want to start though by saying I'm going to talk
9 about building confidence specifically on an
10 environmental management framework or whatever you want
11 to call it.

12 I'm not talking about the big project.
13 And if you want to talk more about that on Friday I'm
14 happy to do it. But I'm going to limit my remarks to how
15 to build some confidence in your environmental management
16 framework, I think that's what it's called, or the
17 environmental monitoring and management framework.

18 So wearing a different hat, my full-time
19 hat, I was actually very involved in the review of the
20 BHP clo -- interim closure and reclamation plan. It was
21 submitted in January of 2007. And it was finally
22 approved in principal by the Board in December of last
23 year, and it's going through a final conformity check
24 now.

25 There was a working group set up through

1 the Wek'eezhii Land and Water Board to review the plan.
2 They divided it up into sections and it was done
3 sequentially. One (1) of the difficulties with that
4 process was that the aboriginal governments were not --
5 didn't have the capacity to participate.

6 They did receive some limited IRMA
7 funding, the Interim Resource Management Assistance
8 Program through DIAND, as you were formerly called. And
9 I know at least two (2) groups were able to access some
10 of that money. And then it ran out partway through and
11 those groups weren't able to participate any further. I
12 shouldn't -- I shouldn't call them groups. They're
13 aboriginal governments.

14 So I think there's some limitations to
15 that working group process. But, you know, I -- I've
16 been involved in a number of multi-stakeholder processes
17 that your department has put on over the last twenty-five
18 (25) years, and they include things like the Northern
19 Contaminants Program, where there is core funding
20 provided to parties to participate in the process.

21 I was involved in the arctic environmental
22 strategy, had one (1) program under there. I think it
23 was called the Community Action Plan or Program where
24 funding was provided for organizations to participate in
25 that.

1 So there's, I think, a variety of models
2 out there on how to truly engage folks in developing a
3 plan or a program. And I guess I want to agree with Todd
4 and the Yellowknives Dene First Nation in terms of the
5 need to nail this down during the environmental
6 assessment to the extent possible.

7 Look, it's common practice for a new
8 developer or new development to at least submit a
9 conceptual re -- closure and reclamation plan. And there
10 needs to be a clearly stated closure goal. There should
11 be mine specific -- or, sorry, component specific
12 objectives identified and, to the extent possible,
13 identify closure, measurable closure criteria so that, at
14 the end of the day, the parties, the inspector, everybody
15 knows what's expected.

16 I don't think we're here. And I'm -- I --
17 I understand that there's a lot more research that needs
18 to be done to get us there, but the -- the material that
19 we're being presented is not put in that kind of a
20 format. You -- you're continually getting a lot of
21 questions about where's this study at, when are we going
22 to get the results of this, what kind of considerations
23 are going to go into de -- designing or developing that.

24 And I think that's a reflection of the way
25 this material's organized in that it hasn't been put

1 together in a way where people from the outside can
2 understand where you're at with the design. We don't
3 understand that. So that's why we're continuing to ask
4 lots and lots and lots of questions.

5 So you need to think about how to organize
6 this material in a clear way. I think you've got your
7 closure goals. We may not all agree on them, but at
8 least you've got some. You've got some component
9 specific objectives for things like the tailings cover,
10 some of the tailings covers, the open pits for -- some of
11 the components on the site, you've got some of that.

12 And in some cases you actually have
13 performance criteria for the frozen block, 10 metres at
14 minus ten (10) for the frozen shield, then you add the
15 water and once it's minus five (5) then you can turn it
16 to a -- a passive system, but the long-term, you don't
17 have that.

18 And I understand that you don't have that.
19 And I understand better now the complexities of why you
20 don't have that now. But for us to understand where
21 you're at in the design process you have to tell us.

22 You have to tell us specifically what the
23 tasks are for closing each of the components, whether
24 it's, you know, the -- the -- the open pits, putting on
25 the tailings covers, or the frozen block. You have to

1 tell us specifically what the dis -- what the tasks are,
2 the research tasks, the engineering tasks that you need
3 to do with a timeline.

4 And if you actually had dollars attached
5 to it, which is what BHP did, then we understand what
6 kind of resources you have to devote, what kind of effort
7 you have to devote to that particular task. And there
8 has to be a timeline attached to it so that we understand
9 where you are in the overall design process.

10 So I think that's what I'm looking for. I
11 think that's what Todd may be looking for, but I don't
12 want to put words in his mouth, because we continue to
13 ask you all these questions about where the design work
14 is at and it's not laid out in that way. So if it could
15 be laid out in that way it would be very helpful.

16 Now the last point I want to make may not
17 go over very well, but look, this is -- and I'm not going
18 to -- as I say, I'm not talking about the bigger issue of
19 trust and if we want to talk again about that on Friday I
20 can do that. But if you really want to engage people and
21 make sure that this environmental monitoring and
22 management framework is -- truly reflects the interests
23 and views of the stakeholders, the people that have to
24 live with this at the end of the day, you need to take
25 the time to do it properly.

1 And if that means delaying the EA, so be
2 it. That -- I know that's not going to be popular. It
3 may not even be popular with the Review Board, but you've
4 already asked for delays before. When the participant
5 funding didn't roll out the way it could or should have,
6 you asked for a delay so that we could actually start to
7 get some resources to more meaningfully participate in
8 the EA.

9 Now the design of that -- the last thing I
10 want to say is the design of that framework plan,
11 although it's part of the EA, it's really your job to do
12 this. It's not the Review Board's job to do it. It's
13 your job as the developer to properly consult.

14 And if that time needs to be taken and you
15 need to tell the Review Board, You know what, we need to
16 take the time to properly do this, that's what I think
17 you need to do.

18 So there's a few thoughts. I hope I've
19 been clear on it, but I'm -- but I'm trying to answer
20 some questions. I'm trying to be constructive and
21 helpful.

22 MS. LISA DYER: Thank you. And -- and
23 this kind of feedback is really important and helpful to
24 us and we're going to take it under consideration. One
25 (1) of the things though that I do have to bring to

1 attention is that we're not a new development.

2 And Giant Mine, yeah, we do have some
3 risks onsite that we have to deal with and there's a --
4 there's time constraints for us. So I understand what
5 you're saying about the need for proper engagement and
6 the need to work together.

7 But I think we have to look -- if we're --
8 if we are going to move in that direction we all have to
9 acknowledge that there is a -- there is real pressures
10 onsite and we can start some of these processes or
11 processes such as the Environmental Management Plans and
12 we can talk more about success and thresholds and all the
13 rest.

14 But I just want to be clear that
15 ultimately we are responsible for ensuring the health and
16 safety -- and I know you know that, Kevin -- but it may
17 not be in the best interest to hold up the EA.

18 So I encourage you to think about ways
19 that we can establish this environmental monitoring
20 framework to respect the environmental assessment
21 process, but to also respect that we have a great
22 responsibility to ensure that the risks are managed at
23 site, and that is the big picture that we are faced with.
24 So it's not minimizing anything that we've heard, but try
25 to get us to see, to focus on the big picture. And I

1 appreciate your frank and open comments, and they really
2 are valuable to us.

3 And I think we can talk more about this on
4 Friday, and I think this has given us some really
5 valuable insight to how the parties are feeling, and so I
6 just -- I appreciate it, but I -- I needed to bring us
7 back to some of the realities we're facing, and not to
8 minimize anything that you've said. So I really do
9 appreciate it. Thank you.

10 THE FACILITATOR PHILLPOT: Kevin
11 O'Reilly, do you have a followup to that?

12 MR. KEVIN O'REILLY: Sure. Thanks.
13 Kevin O'Reilly, Alternatives North. And thanks, Lisa,
14 for your thoughts. And I -- I -- as you know, I do
15 understand the bigger picture. You folks already have
16 some authority under the Waters Act to do what you need
17 in an emergency situation, and this EA hasn't stopped
18 that from happening in any way.

19 My concern, though, is we've got five (5)
20 months between now and when the Review Board's going to
21 have a public hearing, and, you know, look, I'm here by
22 myself today. We can't -- we can't even afford to have
23 our -- our engineer here. We could only afford to have
24 him here for the -- the first day and a half to assist us
25 with the frozen block stuff.

1 So you're looking at a capacity issue, and
2 we've had -- you folks have had ten (10) years, more than
3 ten (10) years to get here. I've been part of that
4 process right from the very beginning, looking on it from
5 the outside. This can and should have been done a long
6 time ago.

7 So I don't want to -- we've got five (5)
8 months left, and I don't want to see the timeframe of the
9 EA get in the way of actually doing a proper job on this.
10 So -- and I'll -- I'll just leave it at that, but if you
11 want to say something else, that's okay.

12 MS. LISA DYER: Thank you. Lisa Dyer.
13 Thank you for letting me say something, Kevin. I -- I
14 don't think we're as far apart as it appears right now,
15 and I think by opportunity to talk more on this topic on
16 Friday, I think we'll see that we're not as far apart as
17 it may appear right now.

18 You've given us some really informa --
19 really valuable information on how we need to provide
20 information and -- and approach the parties so that they
21 have a better understanding and comfort level with where
22 we are but, from what I've heard from you, I don't see
23 that we're that far apart. I don't see that the gulf is
24 as wide as it may appear right now, and we can talk more
25 about that on Friday.

1 MR. ALAN EHRLICH: I'm going to just pipe
2 up that, from the Review Board's perspective, although
3 the Review Board remains committed to a timely
4 environmental assessment process, there have been a
5 couple of points in this EA where, at the developer's
6 request, the developer wanted to do a good job on
7 something that it felt would take a certain amount of
8 time, and they've asked the Board to, I guess, stop the
9 clock or to give them the time that they need.

10 The Board's never had a problem giving
11 developers the time that -- that they need to produce
12 quality information. The Board needs good information to
13 do good environmental assessment. And so I just -- and
14 one (1) of your comments sort of threw in: If the Board
15 has problems with it, really, we've -- we've demonstrated
16 in this that if the developer, you know, is -- is not
17 able to produce what they need to produce by a certain
18 time and has asked us for -- for more time, you know, the
19 Board certainly makes efforts to be reasonable with that.

20 I've got a few questions regarding the
21 tailings cover, and I'd like to move on from this
22 subject, because I think you've covered some important
23 ground, but I think it's been covered well enough for
24 where we're at here. They're -- they're small questions,
25 and I'm -- I'm following up on little odds and ends.

1 The Review Board's IR Number 9 was talking
2 about whether or not you'd be monitoring for chemical
3 uptake in plants in the tailings cover. If you do find a
4 chemical uptake in plants in the tailings cover, what are
5 you going to do about it? What options do you have?

6 I'm referring particularly to selective
7 nutrient uptake of contaminants.

8 MR. BRUCE HALBERT: Bruce Halbert, for
9 the record. That's a very good question, Alan. I'm not
10 sure we have a -- we have a complete answer for that at
11 this point, but one (1) of the design features certainly
12 is, with the rock layer, is to minimize the opportunity
13 for roots to penetrate into the tailings where they could
14 uptake ar -- arsenic. And as -- as John mentioned also
15 to -- to minimize the opportunity for -- by reaction for
16 tailings pour water to move upwards into the root zone of
17 the plants.

18 The real question at the end of the day
19 with respect to arsenic uptake and vegetation is -- can
20 be multi-fold. One (1) is it doesn't have an affect on
21 vegetation itself, and that requires fairly high levels I
22 believe to -- to have adverse effects, but that's
23 something that would have to be assessed in -- at that
24 point in time.

25 And beyond that then it -- it's also a

1 question of how that might feed through the food chain,
2 either to wildlife or to people who may harvest whatever
3 is growing on the tailings. So I don't -- I don't think
4 at this point in time we have a -- a perception as to
5 exactly how we would go about remediation that problem if
6 it happened, but our expectation is it's not, so.

7 MR. ALAN EHRLICH: Okay. And regarding
8 the -- one (1) of the slides showing a cross-section of
9 the tailings cover and I -- you and I saw a layer of
10 coarse material, geotextile of some kind, and then a
11 finer material in a vegetative layer.

12 What's the role of the geotextile in
13 there?

14 MR. JOHN HULL: John Hull. The
15 geotextile, if it is required, which would be part of the
16 final design, is a separation between the fine -- finer
17 material and the vegetative layer and the coarser
18 material just to make sure that the fine material doesn't
19 move in to the coarse material and reduce the effic --
20 efficiency of that -- that break and the purpose of the
21 coarse layer.

22 MR. ALAN EHRLICH: So what would happen
23 if the finer material went down into the coarse material?

24 MR. JOHN HULL: John Hull. The -- the
25 efficiency of that coarse layer would be reduced.

1 There's a potential for migration or -- of pour water
2 working up into the fine layer and/or roots moving down
3 into the coarse layer and then through into the tailings.

4 MR. ALAN EHRLICH: So I guess that stuff
5 could compromise the function of the tailings cover in
6 that case?

7 MR. JOHN HULL: Yes.

8 MR. ALAN EHRLICH: What's the lifespan of
9 a geotextile layer underground? I mean, I -- I'm
10 thinking again about the project being proposed for --
11 you know, in five hundred (500) years this project will
12 be in its infancy, right?

13 These stay -- these tailings covers are
14 intended to stay in perpetuity, so they got to be there
15 and doing well five thousand (5,000) years from now or --
16 or much longer, right. And I -- I don't know how long a
17 geotextile layer works underground or stays underground.

18 Do you know how long one of those lasts
19 underground?

20 MR. JOHN HULL: John Hull. One (1) of
21 the considerations and why the geotextile is just under
22 consideration would be to try and get the gradation
23 between the upper layer and the coarse layer such they're
24 compatible and the material from the vegetation layer
25 doesn't move into the coarser layer, so we wouldn't need

1 that. That's part of the detailed design.

2 MR. ALAN EHRLICH: I understand. But
3 you've indicated that there is a possibility that it
4 could play an important role in the tailings cover. I
5 mean, I -- many parts of this project will need periodic
6 maintenance and the Giant Team has made that very clear,
7 you're going to have people and money on the scene to do
8 the periodic maintenance.

9 So, you know, I have a similar question
10 for the bitumen -- I don't know what it's called, the
11 bitumen layer that parts of the Baker Creek might
12 require. The same question came to my mind when I heard
13 about the riprap that's required.

14 I mean, I know that -- you know, the metal
15 on the riprap it lasts for a very long time, but you're
16 proposing this for longer than a very long time. But at
17 least I understand how people could get to that stuff if
18 they need to maintain it. And you're going to have the
19 people there who know what to look for and ready to
20 maintain it, you know, assuming that -- that the
21 management situation is the same as it is now, I -- I get
22 that.

23 But I'm thinking about the -- you know,
24 the three hundred (300) football fields of tailings and
25 if -- if there's something under them that's doing an

1 important job, but that isn't designed to last as long as
2 the -- the tailings facility is supposed to last, how --
3 how do you propose to deal with that?

4

5 (BRIEF PAUSE)

6

7 MR. DARYL HOCKLEY: Hi, Daryl Hockley.
8 I've been asked to explain some of the history of the
9 design thinking on this.

10 I think the -- the desire is always to
11 avoid the use of synthetics wherever possible in a cover
12 design. In the case of the tailings, we've never been
13 quite sure what materials would be available for that
14 rock layer.

15 If the only thing available for that rock
16 layer is assorted blocky material with big holes in it,
17 then I can think you can all envisage tailings coming up
18 from the bottom and -- and silty cover falling down from
19 the top, and that would -- that could impair some
20 functions of the cover.

21 My -- my -- in the early stages of design
22 the primary role of that rock layer was actually to
23 prevent physical contact, because we realized that a --
24 an upper layer is quite -- quite robust for -- for
25 walkers and -- and that, but it -- but it has a problem

1 when ATVs start -- start driving all over the cover.

2 And we have seen that when you have large
3 open areas that are suddenly accessible to ATVs, that
4 that's almost the first thing that happens, is they get
5 out there and they rip up that cover.

6 So that the original intent of that rock
7 layer was -- wasn't as a capillary break, or anything
8 like that, it was purely as a -- as a protective layer.
9 That function would not be compromised by any amount of -
10 - of silt filtering down, right.

11 There's also a lot of thought that we
12 needn't put well sorted rock in there. We could use run-
13 of-mine rock, which would have -- well, arguably at
14 least, we -- we don't know this, but -- but it could have
15 enough of a grain size distribution that that mixing
16 wouldn't occur.

17 But there are limits in terms of the
18 difference, right, John, in term of grain sizes between
19 two things, if you get the -- get it right they don't mix
20 at all.

21 So -- so the way that we've always done it
22 is we've always shown the drawing with geotextile in
23 there, just as a heads up to people in case we have to
24 use it. A heads up to two (2) groups of people; one (1)
25 people like you who are interested in -- in the

1 environmental assessment process, two (2) people who --
2 who fund this things, and might have to pay for that
3 geotextile, right. And neither one of you want it there,
4 and we don't want it there either, but -- but there might
5 be some -- some places on -- on the cover where it's
6 needed.

7 But the -- the overall objective, it would
8 be to minimize the use of that wherever possible, so.

9 MR. ALAN EHRLICH: Thanks. And I
10 understand that you might not need to use it. I also
11 understand that you might.

12 And if that's the case, how long is it
13 good for there -- before it needs maintenance? I mean,
14 that's my first question. I don't know if this is like -
15 - are we talking seventy (70) years, a couple hundred, do
16 you know?

17 I -- I that's the first part of my
18 question. In -- in the event that you might. But you
19 made it very clear that -- that you might not, and that's
20 the more desirable situation, you know, and maybe there's
21 a good chance you won't. I -- I do understand that.

22 If -- if it's underground in the setting
23 that you're describing how long, in your best judgment,
24 do you think it would last?

25

1 (BRIEF PAUSE)

2

3 MR. DARYL HOCKLEY: That's a -- that's a
4 question of significant debate amongst the engineering
5 community. We -- we know that plastics in the ground
6 last a long, long time.

7 I can get you papers by -- or written
8 statements by learned authorities on the subject that
9 will say that most of these syn -- synthetics should last
10 several hundred years. But I -- I don't actually see
11 that they have the database to make those statements, so
12 I -- I tend not to -- I tend to say a few hundred years,
13 but I -- and I honestly don't know if we can do, as a
14 group, a lot better than that, so.

15 MR. ALAN EHRLICH: But even if we assume
16 that it's several hundred years, you know, take the
17 larger thing, not the more con -- more cautious approach
18 you assume.

19 I mean, your projects gotta last -- well,
20 several thousand years is the beginning, right. It's got
21 to last forever.

22 And so I -- I still see at some point
23 you're either going to -- if it's the case that you
24 actually need to use that, right, you're either gonna
25 need to change it, or I don't know if I can find a

1 material that'll last forever when it's buried between
2 fine ground and -- and coarse rock, but -- but it's just
3 -- it's not in a very accessible spot.

4 So if that was the case, how would you
5 maintain it?

6 MR. DARYL HOCKLEY: I think we would look
7 at -- and again, this is all part of the detailed design
8 that -- that isn't done yet, and I -- I take Kevin's
9 comment, that we're confusing all of you by not being
10 clear about how much is left to be done, that's -- that's
11 a good point.

12 But I guess here's the things that -- that
13 I think we would look at. One (1) is we would look at
14 the possibility of just putting a thicker layer of -- of
15 silty material in those areas. I think that is mentioned
16 in the DAR, that there's a lot of advantages to that.

17 If you -- if you're worried about root
18 penetration, well, you can make sure that rock layer's
19 perfect or you can just put an extra 1/2 metre of soil.
20 There are very few plant in this region that -- that root
21 more than a metre deep, for example.

22 The areas where I would probably think
23 we're most likely to use those things would be in areas
24 that are the wet -- the wetter, finer parts of the
25 tailings. So when tailings are deposited you get these

1 sandy beaches. I -- I highly doubt we're going to have
2 to use geotextiles on those sandy parts because they --
3 they'll separate themselves nicely. And -- and we don't
4 need a capillary breakwater it just keeps going in the
5 sand. Where I think we're more likely to use them is
6 when we're building around the -- the finer tailings. So
7 the sands settle here in the finer clay size and up in
8 the pond, and they settle really slowly and they're very
9 soft and squishy, and to build on those is a problem.
10 Water squirts up. Tailings squirt up. Like I think we
11 may well need them just for construction on some of those
12 areas.

13 So then we're asking the question, Well,
14 once construction is finished and we're two hundred (200)
15 years in the future do we still need them at that point,
16 right. Is there a function really need two hundred (200)
17 years in the future, so.

18 So I think you can see where -- by this
19 process of design we can -- we can narrow down the extent
20 that we need to rely on those things two (2) or three
21 hundred (300) years in the future.

22 MR. ALAN EHRLICH: By -- by my thinking
23 in terms of this project, two (2) or three hundred (300)
24 years in the future is still relatively short-term if
25 this has still got to keep working in ten thousand

1 unless there's something new you want to put on, could we
2 just keep going? Or -- I see nodding. Joanna...?

3 MS. JOANNA ANKERSMIT: The engineer
4 shouldn't panic on my team; I'm not going to try to give
5 a technical answer to this question. Joanna Ankersmit.
6 Everybody ca -- blood pressure down.

7 No, I'm just listening to the exchange.
8 And I think it -- I -- I think what I'm hearing is a
9 concern over what are we going to do if we see something
10 changing in the future that we can't totally predict
11 right now.

12 Is that part of the concern?

13 MR. ALAN EHRLICH: Well, part of the
14 concern is in the extremely distant future, ten thousand
15 (10,000) years or something like that, I mean, it's --
16 prediction becomes extremely difficult as well as
17 predicting, you know, who's on site to respond to this
18 kind of thing. I mean, ten thousand (10,000) years we're
19 talking about, you know, Canada's less than, what is it,
20 a hundred and fifty (150) years old now, and -- and this
21 has to keep -- as I understand it, keep on working for
22 over a millennia, which is an -- an ambitious and
23 challenging thing.

24 And -- and we're used to designing largely
25 for shorter time periods, which -- which makes it to

1 manage it better. So, anyway, that's -- that's the
2 thing.

3 MS. JOANNA ANKERSMIT: I think it's
4 important to note though, it's Joanna Ankersmit, why are
5 we designing this, why are we doing this in the first
6 place. The government's doing it to protect human health
7 and safety in the environment. Everybody knows that and
8 I'm sorry to repeat it, but we have to because that is
9 why we're doing it and that's why -- and that's, you
10 know, I would hope, and I'm pretty confident, that
11 governments going into the future, will still be in the
12 business of protecting human health and safety and the
13 environment.

14 Everything we've seen suggests that we're
15 getting better at that, and we're working very hard at
16 that. I think it's been demonstrated that the government
17 takes contaminated sites overall very seriously with the
18 -- with the 3.5 billion fix-up investment.

19 And going out into the future, I -- I
20 appreciate that that gives people concern. That we can't
21 predict all the things that are going to go wrong. And,
22 we have to -- we have to understand that the government's
23 doing this for a specific reason, because it believes in
24 that. It's part of our democratic way. It's part of why
25 we have institutions of public government.

1 Going forward, those institutions of
2 public government will likely still be in the business of
3 protecting human health and safety. And what's important
4 now, is to set up appropriate adaptive management plans,
5 appropriate environmental monitoring plans, so that we
6 can know when something's going wrong, and have the
7 opportunity to make corrections as we go into the future.

8 MR. ALAN EHRLICH: Thanks for that,
9 Joanna, and I mean I -- you know, I understand that for,
10 what feels like a long time now, next one (1) or two
11 hundred (200) years, we can certainly expect that. It's
12 just that the time period of thousands and thousands of
13 years, there haven't been any governments that have
14 lasted that long, and some governments don't share the
15 same values, say the same priority on the -- the, say,
16 well-being of people compared to finance costs and
17 security and things like that.

18 I mean, different -- different governments
19 have different value sets, and in the very distant
20 future, it's -- it's -- it's just hard to imagine what
21 will be going on. I mean, I -- I -- ten thousand
22 (10,000) years from now, I don't know, I doubt there will
23 be a Canada, for -- likely therefore, not a Giant team or
24 whatever it's equivalent to be.

25 But -- but someone does have to be taking

1 care of this site, because it's that kind of site. And -
2 - and -- and, so I get that. It's just that it's -- it's
3 hard to look at the engineering stuff without considering
4 that -- that term. And so, I guess that's where a little
5 bit of the struggle that you're -- you're hearing is
6 coming from.

7 But, I mean, I understand that the, you
8 know, the government now and for what we normally call
9 long term, one (1), two hundred (200) years, is -- is
10 firmly committed to protecting human health and the
11 environment in this area and is going -- taking great
12 steps to steps to propose a very ambitious project to --
13 to do just that. I -- I -- I do understand that. It's
14 just struggling with -- with different terms when we're
15 talking about things like design periods and things like
16 that, that's strange waters for -- from where I'm coming
17 from.

18 MS. JOANNA ANKERSMIT: I think we'd agree
19 with that comment. Joanna Ankersmit.

20 MR. ALAN EHRLICH: So I -- I understand
21 there's a question from Lukas Arenson, who is one (1) of
22 the Review Board's experts.

23 MR. LUKAS ARENSEN: Yeah. Lukas Arenson.
24 Yeah, I was just -- when we were talking about the -- the
25 long term effect and -- and about the geotextile. I'm

1 not really worried about the geotextile, but what's the -
2 - the weathering of -- of your rock -- of your rock
3 layer?

4 I -- I don't have the details of the cover
5 in my head, but I think it's probably not protecting from
6 all the frost? So I guess the frost might actually go
7 through into your coarse layer. Can you expect -- do you
8 expect any frost weathering? Is this su -- susceptible
9 to any frost weathering?

10 Again, if we're talking the long term, do
11 we have in five hundred (500) years -- do we have sand
12 and silts down there just because of all of the -- the
13 freeze-thaw cycles of -- of the frost penetrating through
14 your -- through your cover and suddenly, your capillary
15 barrier is -- is no longer there.

16

17 (BRIEF PAUSE)

18

19 MR. JOHN HULL: John Hull. The local
20 rock types are fairly resistant to that mat --
21 weathering. The anticipation is that we would select
22 material from the site to make sure that it isn't the
23 schists that are in some parts of the site, but that it
24 is a more durable rock type that would be used for riprap
25 and this -- the layer that we're -- the coarse gravel

1 layer.

2 MR. LUKAS ARENSON: Okay, thank you.

3 MR. ALAN EHRLICH: I'm -- I've got some
4 sort of more specific questions having to do with surface
5 drainage and -- and they deal with relatively short term
6 things.

7 One (1) of the things that I was wondering
8 about has to do with the decommissioning of -- of some of
9 the buildings, including the roaster building, which
10 contains a -- a large amount of -- of arsenic trioxide
11 now. One (1) of the IR responses...

12 A response to Alternatives North IR number
13 16 talked about construction schedules, and we asked a
14 similar question. You've pointed out that there's
15 certain windrose for Yellowknife -- this has to do partly
16 with air quality -- and that you'll be trying to do it at
17 a -- in a period with -- with favourable winds: in other
18 words, when the wind's not blowing towards the city,
19 because we're talking about a lot of arsenic trioxide
20 dust that is currently in a -- a building that was not
21 designed for long-term containment of arsenic trioxide
22 dust.

23 And I know it's -- it's a real challenge,
24 and I -- and I know that it's inside the DAR, but there's
25 a possibility that something more urgent may occur in the

1 meantime.

2 My question is simply this: The windrose
3 says there's certain months the wind comes in from that
4 direction towards Yellowknife, and other months it's more
5 like to go away from it, and I saw it a commitment in
6 there to try and do it at a period when the wind was
7 favourable.

8 I'm just looking for a specific commitment
9 that you're talking about, even within that period, it
10 has to be on a day when the wind is favourable, because
11 there's a lot of variation, you know, within that overall
12 time. In other words, while that is going on there will
13 be real attention to even minor things like -- like wind
14 direction to -- I know it's tough when you're scheduling
15 a large project, but some sort of commitment that when
16 you're doing that kind of deconstruction, with respect to
17 air quality and potential impacts on people, you're doing
18 it when the wind is not blowing towards the City of
19 Yellowknife.

20 MR. GORD WOOLLETT: Gord Woollett. Yes,
21 the decontamination of the roaster complex is going to be
22 a complicated issue with its large quantity of arsenic
23 trioxide inside. The -- the abatement process really
24 will be completed in a similar fashion as asbestos
25 abatement, so it will be done under negative air. The

1 building will be enclosed, so the fibre -- or the dust
2 won't be exiting the building, it'll be drawn into the
3 building. So the wind direction is -- won't really --
4 during the demolition won't be a -- a factor while it's
5 being removed from inside.

6 MR. ALAN EHRLICH: Yeah. I understand
7 that, if everything works, the wind direction won't be a
8 factor. It would be good if you can do that during
9 favourable conditions. Is the Giant team prepared to
10 agree to that?

11 MS. LISA DYER: Lisa Dyer. We will -- we
12 will operate to ensure that there is both worker safely -
13 - safety and public safety. That is paramount to us.
14 So, yes, we will ensure that conditions are right and
15 that they do not add to any impacts that could occur
16 during the demolition of a building.

17 MR. ALAN EHRLICH: Thanks for that --
18 that reassurance. You've indicated very few predicted
19 impacts to -- to wildlife, probably because the site
20 isn't used very heavily by wildlife, you've pointed out.
21 One (1) of the few examples had to do with nesting
22 raptors in some of the structure. I didn't read anything
23 in there on the timing. Is it correct to assume that, if
24 you have to demolish those structures, it will not be
25 during the nesting season?

1 MS. LISA DYER: Lisa Dyer. Yes, we will
2 avoid sensitive periods.

3 THE FACILITATOR EHRLICH: I do
4 understand, in the event of a -- you know, a critical
5 emergency, you're going to do whatever you've gotta do
6 and all else be damned, but I -- I just was wondering,
7 under normal conditions, if I can infer that from what
8 I've read.

9 Other questions? Alternatives North has
10 had its hand -- hand up for a while, and I think Kevin's
11 arm's getting a bit tired there. Kevin, you want to go
12 ahead?

13 MR. KEVIN O'REILLY: Thanks. Kevin
14 O'Reilly, Alternatives North. Alan, I just wanted to ask
15 one (1) quick question, if I can, to your -- what happens
16 with the roaster complex.

17 On page 692 of the -- the DAR, there's a
18 reference to a 2009 initial demolition assessment for the
19 roaster complex. Is that in the DAR itself, or is there
20 -- do we have a copy of that? If not, can we get one?

21

22 (BRIEF PAUSE)

23

24 MR. GORD WOOLLETT: Just to clarify --
25 Gord Woollett -- is -- that clarification there, is that

1 the -- do you have a title of that document?

2 MR. KEVIN O'REILLY: Sorry. Kevin
3 O'Reilly, Alternatives North. It's on page 6 -- it's
4 referenced on 692 of the -- 6-92 of the DAR. I don't
5 think it actually had a reference. So I'm going to
6 furiously try to look it up.

7 MR. ALAN EHRLICH: Maybe I can buy Kevin
8 a minute while he's looking it up by asking a different,
9 fairly short, I think, question in -- in the meantime.

10 In the Developer's Assessment Report on
11 the section on dust suppression, which is 6.6.3, the --
12 the Giant team wrote -- you were talking about
13 controlling fugitive dust from tailings disposal areas
14 and that there's a product called soil cement which you
15 mix with water and you can spray in the spring to -- to
16 avoid fugitive dust emission. But you point out that
17 many of the areas that produce dusting problems can't be
18 reached during the wet and soft nature of the tailings at
19 the time.

20 Have you explored airborne application of
21 a dust suppressant?

22

23 (BRIEF PAUSE)

24

25 MS. JOANNA ANKERSMIT: Hi. We're just

1 trying to -- sorry, Joanna Ankersmit. Kevin, we're just
2 trying to track down the exact document that you were
3 referring to.

4 Yeah, we'd be happy to share that with
5 you, with the caveat that if there is a specific cost
6 we'll have to strip those out and you understand why.
7 That's perfect.

8 So, yeah, we'll -- we -- just one second.
9 I'm not sure if we can provide it this week, or whether
10 it will be an undertaking.

11 MR. KEVIN O'REILLY: Sorry. It's Kevin
12 O'Reilly, Alternatives North. And the reason why I guess
13 I'm interested in seeing this is I was at a big mine
14 closure conference a few weeks ago and I understand this
15 is really complex stuff. It may involve specialized
16 scaffolding, guys in suits, negative air pressure, all of
17 that stuff.

18 So I just want to -- I think it would be
19 really helpful for folks to better understand if there is
20 a plan for how you're gonna do this and what it really
21 involves because it -- it is very specialized work, as I
22 understand it. Thanks.

23

24

(BRIEF PAUSE)

25

1 MS. JOANNA ANKERSMIT: Sorry, Kevin.
2 We're just talking because we're -- just want to make
3 sure that we understand, kind of, what you're expecting
4 from the document. We can release it, but anything out
5 of context on this project is always a concern.

6 Sorry, Joanna Ankersmit. I could feel the
7 stare.

8 So that -- that's the only concern. We
9 don't have a concern with sharing information, only that
10 if it's taken out of context or we provide something
11 that, given what you've just mentioned, if you're looking
12 for -- if you're expecting a plan for the roaster
13 building that's not what that document is about.

14 MR. KEVIN O'REILLY: Thanks. Kevin
15 O'Reilly, Alternatives North. Well, I'm really curious
16 to see it now. So provide it and then if, you know, we
17 have any extra or additional stuff we want to know about
18 it there's an avenue for us to ask an IR if we want. But
19 I'm curious to see what's in there and if it can be
20 provided it would be helpful. And if we have to ask
21 other questions there's a way to do it. Thanks.

22 MR. MARK CRONK: Mark Cronk. Kevin, I
23 had a significant role in the report that's being
24 referred to. It was a highly specialized request and it
25 wasn't a demolition plan for the roaster. At the time we

1 were trying to quantify for ourselves in preliminary
2 design the volume of material that we might expect as
3 highly contaminated material coming off the roaster to
4 see if it would fit in Chamber 15 and it was designed to
5 answer that question.

6 THE FACILITATOR PHILLPOT: And so, just
7 to clarify then, you will be providing that document. Is
8 that something you'll be providing this week or is that
9 an undertaking for -- take it as an undertaking then for
10 November 14th? So that will be provided to the Review
11 Board at that time. Thank you.

12

13 --- UNDERTAKING NO. 7: Provide a copy of the 2009
14 initial demolition assessment
15 for the roaster complex

16

17 THE FACILITATOR PHILLPOT: Alan Ehrlich,
18 did you have further questions or -- oh, actually, it was
19 Alternatives North, sorry.

20 Kevin, did you want to continue with your
21 line of questioning?

22 MR. KEVIN O'REILLY: Thanks. I don't
23 have any other questions on that, but I have other
24 questions if maybe I can sneak one (1) in or...

25 MR. ALAN EHRLICH: Is it a -- is it a

1 short question or a long question, do you think?

2 MR. KEVIN O'REILLY: Kevin O'Reilly,
3 Alternatives North. I don't know anymore, but I had a
4 question about the tailings cover, and I -- because you
5 seemed to, Alan, start to go off onto some other areas,
6 and I thought we were trying to get all of our questions
7 together on certain areas, so.

8 MR. ALAN EHRLICH: Okay, go for it.

9 MR. KEVIN O'REILLY: Okay. Given that...
10 This is in Alternatives North IR number 12, and it's on
11 page 3 of this. Response number 2 talks -- this is where
12 I guess we had raised some issues around trafficability
13 of the tailings. And the response from the developer was
14 that they were conducting a tailings -- or that they had
15 tailings cover test plots that really may not have dealt
16 with the issue of trafficability. But they did indicate
17 here that the investigation report will be available
18 prior to the technical session.

19 So presumably this is some sort of test
20 covers you've got on the tailings. You probably have
21 different layers or depths of layers, different kinds of
22 material. You probably had some performance criteria in
23 mind when you were laying these out, and you've got, I
24 guess, three (3) years of data now.

25 Is there -- then it says here that the

1 investigation report is gonna be available prior to the
2 technical sessions; I don't recall seeing it. Is it
3 still -- what's -- where is at and can we see it? And --
4 because I think it's very relevant to the kinds of
5 questions that Lukas was asking earlier about what are
6 you going to try to design for and what kind of
7 experience do you have.

8 You've got these test plots that have been
9 there now for three (3) years. What's happening?
10 Thanks.

11 THE FACILITATOR PHILLPOT: Thank you,
12 Kevin.

13 Lisa, do you know who you want to answer
14 that question from your team?

15 MS. LISA DYER: Lisa Dyer. Yes, I would
16 like Mark Cronk to answer this question.

17 MR. MARK CRONK: Mark Cronk. And I'm
18 going to answer a question with a question, Kevin.
19 Trafficability, are you asking for trafficability during
20 construction or trafficability after closure?

21 MR. KEVIN O'REILLY: Thanks. Kevin
22 O'Reilly -- O'Reilly, Alternatives North. Forget I even
23 said the word "trafficability." Where -- where's the --
24 the tailings cover test plot investigation report that
25 was promised before the technical sessions? Thanks.

1 (BRIEF PAUSE)

2

3 MR. MARK CRONK: Mark Cronk. Sorry,
4 Kevin. That IR had a couple of issues going on it and it
5 was -- had to sort out where we were at.

6 There is a tailings cover trial that has
7 been completed, and it was intended to look at technical
8 issues associated with consolidation of the tailings,
9 pour water issues and stuff like that.

10 The trafficability investigation, we have
11 not done. Sorry.

12 MR. KEVIN O'REILLY: Where is the report?

13 MR. ALAN EHRLICH: So the -- the question
14 that Kevin O'Reilly is asking is, where is the report?

15 MR. MARK CRONK: Sorry, Kevin. The
16 trafficability report you're not looking for, you're
17 looking for the tailings --

18 MR. ALAN EHRLICH: Yes.

19 MR. MARK CRONK: We -- sorry, just trying
20 to get through it. We can provide that.

21 THE FACILITATOR EHRLICH: When you --
22 when you say we can provide that, do you mean you'll be
23 providing that during this week, or you'll be providing
24 that electronically through the Review Board? Is this a
25 -- is this an undertaking, or -- please elaborate.

1 MR. ADRIAN PARADIS: We'll provide it
2 through an undertaking to the Board. We'll try and
3 provide it by the 14th, but it will be in by the 14th.

4 THE FACILITATOR: Okay, Wendy, (phonetic)
5 do you know what number undertaking we're on there?

6 That will appear as undertaking number 8
7 on the transcript. And Yellowknives Dene First Nation,
8 has a question.

9
10 --- UNDERTAKING NO. 8: Provide a copy of
11 investigation report
12 regarding tailings covers
13

14 MR. LUKAS NOVY: Hi there, it's Lukas
15 Novy here, and just have a quick follow up question to
16 the cover, because I know we've talked -- you talked
17 about the geotextile and then there was some freezing,
18 and I -- a key com -- performance criteria, or thing that
19 -- that can be seen pretty quickly is the settlement.

20 And I know that the -- a report is on it's
21 way, but I was just wondering if you could provide some
22 comments on what you guys have seen for the different
23 alternatives the past three (3) years in terms of
24 settlement?

25

1 (BRIEF PAUSE)

2

3 MR. DARYL HOCKLEY: I'm -- I'm not up to
4 speed on the -- the findings of that report with respect
5 to settlement. In any case, the -- those tests take
6 place in a particular area of a particular pond. And I
7 would think settlement will vary from area to area and
8 pond to pond. So, it was in -- in -- by no means
9 intended to be a universal settlement test. It was
10 intended to look at the response of cover variance to
11 settlement. And -- and that's -- that's I what I --
12 that's I think what it does, so.

13 So is -- is there -- is it a uniform
14 settlement? Is it non-uniform settlement? Does the
15 settlement cause a boiling effect, those -- those are the
16 sorts of things that it looked at.

17 MR. LUKAS NOVY: Lukas Novy. Yeah,
18 that's understandable. It's just -- I'm -- I --
19 differential sediment, especially in cold climates with
20 different mechanisms to doing that, it's -- it's -- it is
21 an issue of concern. And I guess it's just that I'm
22 hoping that in the report there -- there is at least some
23 sort of quantifiable value because it -- it's measured.
24 So there -- and it's just the -- it's a -- it's a useful
25 indicator for the potential performance of a cover and, I

1 -- I guess if you guys can't provide it at this time, and
2 I'm hop -- I'm assuming it was something that would be in
3 the report.

4 MR. DARYL HOCKLEY: Yeah. The -- the
5 real problem is that that report was -- has been in --
6 those of us who've read it read it quite a while ago and
7 just aren't quite familiar with what it says. But --
8 but, yeah, it was intended to look at that, so I -- I
9 presume it will have what you're looking for there at --
10 at some level anyhow.

11 MR. LUKAS NOVY: Lukas Novy. Thank you
12 very much.

13 THE FACILITATOR EHRLICH: And it -- since
14 that is the report that -- that the Giant team has
15 offered to submit, you'll be able to -- to see it by
16 November 14th, or on November 14th. So, hopefully
17 that'll be okay.

18 I'd like to bring it back to a question
19 that I asked while Kevin was looking for a reference. It
20 had to do with fugitive dust emissions, your inability to
21 get on to the area when it's wet, because you can't go
22 over land, and I -- I was wondering if you've looked at
23 airborne application of any dust suppressants?

24 MR. MARK CRONK: Alan, my apologies for
25 not hearing your original version of your question.

1 safety risks, but localized exposure
2 could compromise some uses."

3 And I read it over and I couldn't quite
4 figure out what kind of uses you were talking about.
5 What did you have in mind when you said localized
6 exposure to tailings could compromise some uses. Or you
7 said localized exposure could compromise some uses.

8 This was in the context of a question
9 about -- well, actually, it looks like you've got it in
10 front of you there, so I'll -- I'll let you read the IR
11 for yourself. But I was just wondering if you can
12 elaborate a little bit on what you mean when you say that
13 localized exposure could compromise some uses?

14

15 (BRIEF PAUSE)

16

17 MR. ALAN EHRLICH: This is SN IR Response
18 number 2. I'm reading page 2 of 5, the third paragraph
19 down of the summary.

20

21 (BRIEF PAUSE)

22

23 MR. DARYL HOCKLEY: IR number...?

24 MR. ALAN EHRLICH: City of Yellowknife
25 Information Request number 2, page 205. In the middle of

1 page 205 you'll see a summary. The third paragraph down
2 in that summary says that. I -- yep, there you go.

3

4 (BRIEF PAUSE)

5

6 MR. ALAN EHRLICH: So to repeat again, my
7 -- my question was, you're saying that exposure to
8 tailings is not expected to lead to broad human health
9 and safety risks, but localized exposure could compromise
10 some uses. And I looked in the rest of it and I couldn't
11 quite put my finger on -- on what would be included
12 there.

13

14 (BRIEF PAUSE)

15

16 MR. DARYL HOCKLEY: The -- the question
17 was about what factors were considered in the design.

18 MR. ALAN EHRLICH: My question is what
19 kind of uses are you talking about when you say could
20 compromise some uses?

21 MR. DARYL HOCKLEY: Yeah. Sorry, Daryl
22 Hockley. The -- but the Information Request was about
23 what was considered in the design, and so in the
24 consideration of the design we -- we -- the risk
25 assessment showed that -- well, in the con -- in the

1 design considerations we seek to avoid even localized
2 exposures, because even localized exposures could
3 compromise some uses.

4 And -- and an example of such a use, if
5 that localized exposure happened to be in an area that
6 was particularly attractive to a plant that had some use,
7 and people were to come and pick that plant that -- that
8 could constitute a local risk that would not be picked
9 up, say, in the broad regional risk assessment. That --
10 that -- so that was the thinking.

11 MR. ALAN EHRLICH: Okay. Thanks for that
12 clarification. I believe the -- that Doug Ramsey, who's
13 an expert consultant for the Review Board has a question
14 regarding the tailings cover.

15 MR. DOUG RAMSEY: Doug Ramsey. This
16 question has a rather long preamble but I do intend to
17 get to what amounts to a fairly short question at the
18 end.

19 As advisors to the Board, we're ultimately
20 charged with having to make a recommendation to them
21 regarding whether there's a potential for a significant
22 adverse enviro -- effect to the environment or hu --
23 human health.

24 And we're looking at a project that, as
25 has been discussed over and over the past several days,

1 is a project -- a -- a remediation in perpetuity. And to
2 perhaps put human -- more human terms to the definition
3 of perpetuity, we're looking at something that extends
4 well beyond -- beyond the several hundred years of
5 European occupation of -- of North America, and even
6 beyond the several thousand years of settlement by
7 Aboriginal peoples. And we're looking at the potential
8 for significant adverse effects at this stage anyway over
9 that entire period.

10 After sitting here for a couple -- two and
11 a half (2 1/2) days now, it seems evident that the design
12 concept surrounding the frozen block has been fairly well
13 considered -- and extensively considered, suggesting that
14 certainly the -- the project team sees that as being the
15 primary hazard to be managed.

16 But that said, it's not the only hazard to
17 be managed. And over the last day and a half we've seen
18 more coverage of some of the peripheral aspects of the
19 project, the things on surface, the water management,
20 aspects like that.

21 And repeatedly the answers to questions
22 are coming -- are, We don't know, we haven't taken the
23 design that far, that will be decided some time in the
24 future. And some of that relates, for example, to the
25 tailings. We've got what seems to be a conceptual

1 design, but it's not clear what the design objectives are
2 for that design.

3 It's a design to have -- and we're -- when
4 I'm talking about design objectives, it's less about
5 details about how these are going to be achieved, but
6 what needs to be achieved for -- as -- as a simple
7 example, I want to design a cover so that the vegetation
8 roots don't penetrate into the tailings.

9 That's a design objective. It can be
10 achieved in a number of different ways. You can have the
11 -- the rock layer that can -- that can help with that.
12 You can have that in addition to a thicker layer of
13 overburden cover, for example.

14 But it seems that at the environmental
15 assessment stage, to have clearly stated design
16 objectives is particularly helpful to understand what the
17 potential environmental effects, or potential failures of
18 different parts of -- of the project are.

19 Another example, and moving a little bit
20 away from tailings for example, is whether or not there
21 are going to be pit lakes on the site at some time in the
22 future. That's related to whether or not, and when, the
23 underground is -- is flooded, and then whether or not the
24 pits themselves are backfilled.

25 If there are pit lakes, there is the

1 potential for them to be contaminated. And if there are
2 pit lakes and they're contaminated, there is the
3 potential for them to interact with other components of
4 the surface water management system, if only during
5 extreme design events.

6 And much as it may not be possible to
7 explicitly state that something will or will not be done,
8 if there is a maybe/maybe not, it should still be
9 possible at this stage to articulate what the design
10 objectives would be in making that consideration at some
11 time in the future. Because at this stage there are some
12 things, like whether or not there's going to be a pit
13 lake, that basically falls in the category of, Trust us,
14 we'll figure it out later.

15 At the same time the Board still needs to
16 make a decision about whether or not there's the
17 potential for significant adverse effect, without knowing
18 what criteria are going to be considered in that decision
19 some time in the future.

20 We know lots of things will change, but
21 one (1) of the things to look at, along with having these
22 clearly stated design objectives, and it's not necessary
23 to have the detailed designs, but to have the clearly
24 stated design objectives for these different elements, is
25 to have some statement of expectation of how various

1 components of the surface works, for example, can be
2 expected to evolve over time.

3 And this comes down to the questions of
4 whether or not it matters if the geotextile stands up for
5 more than a couple of hundred years, or not. Because as
6 the underlying tailings consolidate, how are those going
7 to change? We typically don't look at that in too much
8 detail in environmental assessments for new projects but,
9 again, we're looking at something here that is being
10 presented as remediation for perpetuity.

11 Now, getting down to my question, it's:
12 Is it possible for the project team to provi -- to
13 clearly articulate their design objectives for these
14 different components of the surface development as a part
15 of this environmental assessment?

16

17 (BRIEF PAUSE)

18

19 MR. ADRIAN PARADIS: Adrian Paradis for
20 the Giant Mine project team. If you can excuse us for
21 half a sec.

22

23 (BRIEF PAUSE)

24

25 MS. LISA DYER: Lisa Dyer. We just want

1 to -- we're going back through the DAR so that we can
2 refer to the objectives that have been stated in the
3 document, so I just want to give Daryl a little bit of
4 time to find those. But we will be referring back to the
5 documentation that we presented. Thank you.

6

7

(BRIEF PAUSE)

8

9 MR. DARYL HOCKLEY: I think there's a --
10 there -- there are some good points there, Doug, in that
11 certainly we -- we have long discussions of these things
12 sometimes, and it's -- and it causes more confusion than
13 good. But I have to object a bit to -- to the -- to the
14 sentiment that -- that we -- we don't understand our
15 objectives or that we're being wilfully confusing.

16 On the issue of pit lakes, for example, it
17 is -- has -- has been absolutely clear to this project
18 team for most of the time that I've been part of it that
19 we are not proposing pit lakes, and I am quite sure we
20 have said that over and over and over again in public
21 meetings.

22 There were some documents on the record
23 even prior to there being a Giant Mine project team that
24 had lovely pictures of pit lakes. They were lovely
25 pictures of pit lakes, and I think that has stuck in

1 people's heads all this time. So we get questions at
2 public hearings. They keep coming back, but I assure you
3 that we -- we have been very clear that -- that this --
4 this -- that they are not part of our plan.

5 Given that some people really like -- like
6 to -- like to see them, we -- we do at times say, We are
7 not ruling out the possibility that in future you might
8 want to turn these things into a pit lake, but it is
9 certainly not part of our -- our plan in any way, shape,
10 or form. So it's -- it's something that, in -- in two
11 (2) or three hundred (300) years, when it's absolutely
12 clear there's no contamination, et cetera, et cetera, the
13 future public might want to have pit lakes. We say,
14 Fine, you can talk about that in a couple hundred years,
15 but it's in no way, shape, or form part of this plan.
16 And, in fact, on the contrary, we say to people, Don't
17 count on going swimming in these pit lakes at any time,
18 because, in our opinion, they'll never be there.

19 So that's what we're trying to -- you can
20 see how we're trying to get our -- our message clear, and
21 it's...

22 MR. DOUG RAMSEY: Doug Ramsey. Thank
23 you. I just want to make it clear I'm not suggesting in
24 any way, shape, or form that there's any attempt to
25 wilfully mislead. I understand that it's a very complex

1 project and questions do keep coming up.

2 And even as an example, in your answer to
3 my question there, it was -- could be interpreted as, We
4 have no plans at this time for pit lakes, but they could
5 appear in the future, which, when we're looking at a
6 project in perpetuity again, introduces the possibility
7 in the absence of a design objective for that possibility
8 that you could say, Well, we don't plan on having pit
9 lakes. If somebody in the future would like to, these
10 are the kinds of design objectives they're going to have
11 to look at.

12 MR. DARYL HOCKLEY: Yeah, and I can see
13 it would be helpful for us to lay those things out, but -
14 - but for us to do that is then to raise the hope that we
15 don't particularly believe in. We could then be accused
16 of trying to sell people on an option when we don't
17 believe in it. That -- that's the struggle we have. And
18 -- and I think, if you -- if you read the text, it is
19 very carefully worded, and I'm quite sure I should have -
20 - maybe I should just have read you the text, because
21 there it makes it very, very clear our position on these
22 things.

23 So -- but I can turn to your question
24 about the covers now, because the objectives for the
25 covers, I think, are also fairly clearly stated. There

1 are overall site-wide objectives that are in the start of
2 chapter 6, in 6.1, and they talk about possible future
3 uses of the site, making it available for future uses of
4 the site. And that's carefully chosen words. We don't
5 intend to tell people what the future uses should be, we
6 want to make it available for future uses, which need to
7 be discussed with the communities.

8 We then talk -- translate those into
9 functions of each of the layers, and now I've turned the
10 pages, 667 I think it was. The design concept proposes a
11 two (2) layer cover. The bottom layer will serve three
12 (3) functions: number 1, act as a robust, physical
13 barrier, et cetera, et cetera. The upper layer will
14 serve four (4) functions: number 1, act as a clean
15 surface that will shed runoff, et cetera, et cetera.

16 These are as precise as I have ever seen
17 cover -- cover functions defined anywhere, and I've dealt
18 with lots of covers. One (1) thing you won't find in
19 here is -- is a lot of quantification, and that's partly
20 because I've built lots of covers, and I -- I've never
21 really seen an adequate quantification of them. I'm --
22 I'm highly suspicious of -- of cover designers who tell
23 me they're going to achieve 3 1/2 percent infiltration.
24 So -- so I always encourage my clients to avoid those
25 type of quantitative things, and instead talk in terms of

1 functions.

2 I believe those can still be turned into
3 mon -- monitorable and verifiable performance. It's
4 maybe not as easy as picking a single number, though, and
5 it probably is a question of -- of the sorts of dialogue
6 that we're talking about in the -- in terms of EMPs,
7 things like that.

8 MR. DOUG RAMSEY: Doug Ramsey. No, I --
9 I appreciate the difficulty in picking a single number.
10 I do think it would be helpful if it would be able -- if
11 you would be able to, for example, indicate a range.
12 Like 3 1/2 percent infiltration, that's very difficult to
13 -- to justify, even -- even in a very detailed design
14 scenario, but indicate that there's good reason to
15 believe it'll be less than twenty (20) and more than ten
16 (10)?

17 MR. DARYL HOCKLEY: Yeah. The -- even
18 that is -- is harder than you think sometimes, but the
19 fact is, in this case, infiltration is -- is the only
20 quantifiable objective, really. And -- and it's -- it's
21 frankly irrelevant, because any water that -- that
22 infiltrates through this cover is -- is going into the
23 capture system for the minewater and will be treated
24 there. It will be less contaminated than the water that
25 flows through the underground tailings.

1 So -- so we normally talk about this --
2 this cover. We believe there will be a reduction in
3 infiltration, but at no time have we promised it to be
4 any significant effect on infiltration. The more
5 important objectives, in my opinion, are things like
6 facilitating future land use. And how do we quantify
7 that? Well, we could, in theory, do that, but it would
8 be presumptuous for INAC to start doing that without
9 talking to the communities and the -- and the
10 Yellowknives Dene about what they see as future land
11 uses. So -- so I think we agree in principle, it's just
12 a little bit harder to get there than -- than it might be
13 in some -- some simpler projects, I guess.

14 MR. DOUG RAMSEY: Doug Ramsey. Thank
15 you. I'm not suggesting that it's -- it's a simple place
16 to get to because this is by no means a simple project.
17 I would suggest though that it is relevant, for example,
18 to consider, at least in general terms, the quantity of
19 infiltration at this time because, again, we're not
20 looking at a short-term treatment scenario.

21 MR. DARYL HOCKLEY: Yeah, the -- the
22 amount coming through the coverage is pretty
23 insignificant compared to the water we're going to be
24 capturing in the -- in -- in the mine water system and is
25 going to flow through the -- the contaminated tailings

1 underground.

2 But look, it's -- it's not -- it's not
3 hard to put a range on these numbers. There's -- there's
4 a natural infiltration in the -- in the range, and we --
5 we can certainly do that. I just don't think that that
6 actually meets the needs of our performance criteria
7 because that -- that range is going to be so wide it's
8 going to be -- it's not going to be something that the
9 inspector is going to be able to usefully use.

10 I think we have to work a little longer
11 and a little harder and -- and crystalize the more
12 important objectives in terms of something verifiable.

13 THE FACILITATOR EHRLICH: Does anyone
14 have any other questions for the developers? We're
15 getting near our wrap-up time.

16 And I see Environment Canada, Amy Sparks,
17 has got a question regarding surface use and surface
18 remediation?

19 MS. AMY SPARKS: Thanks. Amy Sparks,
20 Environment Canada. I'm wondering about the depth of
21 covers, not on tailings, but over the excavations. And
22 the reason I ask is that to meet those soil quality
23 objectives, if you dig down 2 metres but only put half a
24 metre on top and leave some contaminated material, you're
25 not meeting those objectives because you're not removing

1 those pathways.

2 So I was wondering about the depth of
3 those covers, and I know that might vary, but maybe what
4 the goal is for the covers?

5 MR. ARTHUR COLE: It's Arthur Cole. The
6 covers within the Class 3 and Class 2 pocket areas, they
7 are very similar to what's proposed for the tailings. So
8 it's the same design essentially.

9 MS. AMY SPARKS: Amy Sparks, Environment
10 Canada. Yeah, and I can see that from the diagrams. But
11 again, there's no real depth on the tailings covers, and
12 I understand that's because of availability of bore
13 materials, et cetera.

14 Can you speak any more to that? Is there
15 -- is there a goal for that depth to be on top of those
16 excavations or is it really based on material?

17

18 (BRIEF PAUSE)

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20 MR. ARTHUR COLE: The thickness, Arthur
21 Cole, will be consistent with the numbers in the DAR, but
22 we haven't finalized that design yet, so we don't have
23 that information right now.

24 MS. AMY DYER: Art, can you clarify what
25 the numbers are in the DAR just so it's on the record?

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(BRIEF PAUSE)

MS. AMY DYER: Sorry, John, I caught you off guard.

(BRIEF PAUSE)

MR. JOHN HULL: John Hull. The numbers that have -- identified in the DAR, and which we are working in this range. The vegetative soil layer would -- would potentially range from 30 centimetres to 70 centimetres. The coarse gravel layer would range from 15 centimetres to 60 centimetres, and those numbers are to be confirmed.

The re -- the availability of material on site would not restrict or -- or identify a limit. We would find the material or make it work with what the design needs for protecting the tailings and isolating them from the environment.

MS. AMY SPARKS: Amy Sparks. So, I just want to -- and not in terms of the tailings, but in terms of, for example, the petroleum hydrocarbon contaminated soil. That wouldn't actually meet the industrial soil quality objectives that are laid out in the CCME, because

1 you're required to be deeper than that to have higher
2 numbers. So, ultimately, if we placed a meter on top of
3 the contaminated soil, you're not actually meeting those
4 objectives.

5 MR. ARTHUR COLE: It's Arthur Cole. All
6 of the petroleum hydrocarbon affected materials will be
7 excavated and will be de -- disposed of on site. So that
8 -- sorry -- excuse me, will be land firmed on site.

9 THE FACILITATOR EHRLICH: We're getting
10 close to the wrap up. I see that Alternatives North has
11 another question.

12 MR. KEVIN O'REILLY: Kevin O'Reilly,
13 Alternatives North.

14 I guess in -- in several places in the --
15 in the presentation, in the Information Request
16 responses, and in the DAR itself, the developer says that
17 there's going to be site maps prepared to prevent
18 accidental excavation of the contaminated material in the
19 future.

20 So I'm just trying to figure out in my own
21 mind, what are these -- are they going to be paper maps?
22 Who is going to have access to them, where they're going
23 to be stored, what is the land use control that's going
24 to be put in place forever to make sure that people don't
25 go around there and start digging up stuff?

1 And -- and I know this flows over into
2 some of the discussion I certainly want to have on
3 Friday, about document control and preservation of
4 documents forever, so I -- I just wanted to get it out in
5 the context of this slide, I guess, which was on the --
6 excavating contaminated materials, so. Thanks.

7 MS. LISA DYER: Kevin, I know this is an
8 area that you are passionate about, and I know that from
9 being at the perpetual care workshop. So, I am going to
10 ask the question of you, knowing that you spend a lot of
11 time on these issues, what do you think is necessary so
12 that we underspan -- understand your concerns further?

13 And if you want to kind of deal with this
14 more on Friday, I am open to it too. But obviously, this
15 is a concern, so I -- I'd like to hear, you know, what
16 you see as necessary.

17 MR. KEVIN O'REILLY: Thanks. Kevin
18 O'Reilly. Well, I'm not quite sure I can be much clearer
19 but you folks are going to excavate some areas. You're
20 going to have covers on nasty stuff out there. How do we
21 make sure that somebody doesn't go and dig that stuff up
22 into the -- that stuff up, or dig into those areas in the
23 future, forever?

24 We're going to have, maybe, some paper
25 maps, we're going to have maps that are going to be on --

1 as a -- stored as electronic files, but how do we make
2 sure that tho -- that information is conveyed to a future
3 generation five thousand (5,000) years from now? And
4 what sort of institutional land controls are there to
5 make sure that people don't go and live on top of a
6 tailings pile out there that's -- doesn't have proper
7 cover, and so on.

8 So, presumable one (1) -- one (1) way is
9 to try to work with the City to get the proper zoning out
10 there, so that you don't have the opportunity to develop
11 some of those areas. But that's only as good as long as
12 there's a -- a city council here.

13 What about registering this -- a -- a
14 caveat or something on the -- the land title; GNWT
15 withdrawing the -- the surface of the area from any
16 further disposition? This kind of information is nowhere
17 in the DAR, that I can see.

18 And then how do we -- how do you make
19 those maps available to other authorities, other people,
20 future generations in a way that they can be used so that
21 people don't harm themselves?

22 So, I don't know, there's a few ideas
23 there, but I -- I honestly don't see any of that kind of
24 thinking in the DAR. And we have to be thinking about
25 this forever.

1 So, I'll just leave it at that for now and
2 see if you folks have any further ideas around this, but
3 it's something that's bubbling away in the back of my
4 mind, as you well know. Thanks.

5 THE FACILITATOR EHRLICH: Okay, Kevin,
6 thanks for that. You're right that -- that perpetuity
7 issues are going to be dealt with over the next couple of
8 days. It's a good segue into the wrap up here.

9 Perpetual care is one (1) of the things
10 that's so closely related to risk, with risk being a
11 function of likelihood versus -- times severity. I mean,
12 it's hard to deal with likelihood without considering
13 time at the same time. So, we did put perpetual care
14 under the risk assessment side of things, which is
15 tomorrow.

16 But I understand what you're saying; long-
17 term monitoring evaluation of management which is Friday,
18 obviously the temporal scope of this project, not of the
19 EA, but of the project, is something that's going to need
20 to come up then as well, because I don't know how you
21 could deal with adaptive management for a project
22 proposed for forever without considering what that really
23 means.

24 So, I -- what I didn't see today that I
25 did see in the last two (2) days, I didn't see a whole

1 pile of hands going up near the end, 'cause we had a
2 whole pile of questions left over. There'll still be an
3 opportunity at the beginning of tomorrow if people have
4 any questions after sleeping on it that they want to
5 address -- well, first let's find out, is the -- the
6 Giant Team going to have people here tomorrow that are
7 familiar with surface remediation?

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(BRIEF PAUSE)

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THE FACILITATOR EHRLICH: She -- so,
she's smiling and nodding. Are -- if the right people
are here we'll allow -- if people realize they had a
couple questions that they missed during today and they -
- they really want to get them on before we move onto the
next subject, we'll allow them early tomorrow morning,
remembering that if we don't get to where we want to be
by tomorrow at 5:00, we're just going to keep on trucking
into the evening. So -- and I appreciate all the party's
willingness to do that, as indicated this morning when I
asked.

But I -- I -- I think that we did a pretty
good job of -- of getting caught up, while still giving
everyone the opportunity to asks questions they've needed
to this point.

1 There's a -- a question -- is it a
2 question or a comment from Kevin?

3 MR. KEVIN O'REILLY: Thanks. Kevin
4 O'Reilly. I can tell you, Alan, right now I've got four
5 (4) other lines of questioning, or questions, maybe, that
6 I can tell you about right now if that's of any help to
7 the -- the Giant team, because we're not going to get to
8 it today.

9 Shall I just go ahead?

10 THE FACILITATOR EHRLICH: If you can do
11 it rapidly, yes.

12 MR. KEVIN O'REILLY: Yeah. I want to ask
13 some questions around the revegetation studies or plans.
14 I want to know what's happening with that. I want to
15 know how big the treated water storage pond is going to
16 be. And that -- that's an IR that was in today's stuff.

17 I want to look at cost of fencing versus
18 backfilling over the long-term, and when the CALPUFF
19 modelling for Jackfish is going to be done, because
20 that's absolutely essentially to a proper cumulative
21 effects assessment. So I'll just -- that's what I want
22 to know. Thanks.

23 THE FACILITATOR EHRLICH: Is CALPUFF
24 related -- something related to air quality? I don't
25 remember the acronym.

1 MR. KEVIN O'REILLY: Yes, it is. Thank
2 you.

3 THE FACILITATOR EHRLICH: I thought you
4 were using strong language for a minute there, but now I
5 realize that you -- no -- no stronger than usual anyway.

6 No, and, you know, I have no doubt the
7 Giant team appreciates the heads up. Does anyone else
8 want to just let the Giant team know what might lie ahead
9 for tomorrow morning in the interest of efficient
10 progress there?

11 Todd Slack of the Yellowknives...?

12 MR. TODD SLACK: Todd Slack, YKDFN.
13 Sorry, I meant to ask this earlier, and the question is:
14 In terms of air quality is GNWT a regulator for projects
15 on the commissioner's lan -- within the commissioner's
16 land?

17 THE FACILITATOR EHRLICH: If it's a
18 simple yes/no you're looking for, and if the Giant team
19 is prepared to give it now, we can -- maybe we can
20 resolve it very quickly.

21 Or is this something that you need to go
22 back and look into? You want to -- you want to deal with
23 it now? Okay, to the Giant team.

24 DR. RAY CASE: No, we'll -- we'll address
25 things in the morning, keep things moving here.

1 THE FACILITATOR EHRLICH: Okay. Great.
2 So that wraps up the discussion on surface remediation
3 for today, but we've got some undertakings.

4 And I'm going to need a little bit of help
5 to get these right, because it's hard to facilitate and
6 simultaneously keep track of all this stuff.

7 We know that DFO is looking for additional
8 information on an emergency scenario in which Baker Creek
9 -- or emergency scenarios in which Baker Creek would need
10 to be rerouted.

11 And I remember my -- my point before. If
12 you look at the undertakings, and you look in the
13 transcript, please go back to the original discussion to
14 remember the full context of the undertaking.

15 But emergency scenarios. That was -- it
16 sounds like that information has already been provided in
17 writing from DFO to the Giant team. They've already
18 provided in writing their details regarding the question.

19

20 (BRIEF PAUSE)

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22 THE FACILITATOR EHRLICH: An add-on to
23 that was a request from the Yellowknives to -- to add
24 information regarding the possibility of back flow from
25 Yellowknife Bay into the Yellowknife River.

1 (BRIEF PAUSE)

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3 MS. LISA DYER: Alan, Lisa Dyer for the
4 record. We have diligently recorded it. I want to thank
5 Katherine Silcock for doing that. And I can read off
6 what we got.

7 THE FACILITATOR EHRLICH: Please go
8 ahead.

9 MS. LISA DYER: Okay. I'm going to try
10 and do this with a computer screen. So we have
11 Undertaking 5, is -- and it's:

12 "Provide clarification to the group on
13 how we see the Baker Creek north
14 diversion being deployed as a
15 contingency. Provide the current
16 thinking and outline an approach to the
17 current thinking that the project
18 requires quick summary of the process
19 that would be followed for any
20 authorizations for contingencies. How
21 -- how would we go about following the
22 directive from the inspector for this
23 work. Include a discussion on the
24 backwater flow from the diversion entry
25 into YK Bay by November 15th."

1 So that -- 14th, sorry. So that's
2 Undertaking 5. Next we have a task, and this is to
3 provide information on the alternative methods for
4 stratification sampling. And we will do that in the --
5 have we don't that? No, we haven't. Provide information
6 on the alternatives methods for stratification sampling.

7 Within the mine. Okay, so that's a task.

8 We made a commitment to provide
9 information on the thinking surrounding the diversion as
10 it relates to reduction in arsenic loading to YK Bay, and
11 when it comes available. So this is when it becomes
12 available, this is not as an undertaking.

13 THE FACILITATOR EHRLICH: But as I
14 recall, you were hoping to be able to do that during the
15 environmental assessment, in other words, hopefully prior
16 to closure of the public record that precedes hearings.
17 Is that right?

18 MS. LISA DYER: Well, we said as and when
19 it becomes available is what we agreed to.

20 THE FACILITATOR EHRLICH: And what I'm
21 asking is: Do you think you will be able to do it in the
22 environmental assessment in a time that's still
23 meaningful for parties, which means before the public
24 record closes prehearings. That would put it, I think,
25 around the end of February.

1 MS. LISA DYER: I will continue reading,
2 and ask people to get back to me on that. I'm looking
3 specifically at Bruce Halbert to give us some indication
4 on that.

5 The next one is an internal commitment to
6 GNWT to provide contact information -- information to the
7 City, to discuss standards being used in the town site
8 remediation. GNWT committed to follow-up with the City
9 if they did not contact those people. So, that's outside
10 the process.

11 THE FACILITATOR EHRLICH: We think that
12 we have as Undertaking Number 6, that the City will
13 provide its current standards for its landfill for the
14 public registry.

15 MS. LISA DYER: Yeah, that's -- I'm --
16 I'm getting to that.

17 Okay. So, Undertaking 6 is the City to
18 provide landfill standards they're using for non-
19 hazardous landfills. So, that's Undertaking 6.

20 Undertaking 7 is provide document referred
21 to on page 90 -- 692 of the DAR. It's the demolition
22 assistant -- assessment for the roaster. So, that's
23 November 14th, but costs will be removed from that
24 document.

25 Undertaking 8 is provide the report on the

1 tailings cover trial test plot by November 14th. And
2 that is the undertakings I have, and that is an interim
3 report that we will be providing.

4 THE FACILITATOR EHRLICH: Thanks, Lisa,
5 that matches perfectly the list that we have here as
6 well. And so that's -- it's quite helpful. I'd like to
7 thank again the fact that everyone here has been very
8 forthcoming and trying to be really, you know,
9 constructive in answering what are some challenging
10 questions and -- and that you've also brought together a
11 team that's able to deal with these kinds of questions;
12 it's quite impressive when you consider the -- the
13 breadth of what we're dealing with here.

14 I think it's been another successful day.
15 I think we know a lot more about what's happening on the
16 surface now than we did this morning. We being everyone
17 besides the Giant Team; you guys already knew it. And
18 we'll try and keep the amount of tomorrow devoted to the
19 surface remediation quite limited, because we've got
20 quite a meaty subject for the rest of the day as well,
21 that Risk Assessment.

22 I'll repeat as I always do, please take
23 your books and papers off the table and put them on your
24 chairs, so they can clean up the tables and we'll see you
25 again at nine o'clock tomorrow morning. Thank you.

1 --- Upon adjourning at 4:55 p.m.

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3 Certified Correct,

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7 Wendy Warnock, Ms.

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