MACKENZIE VALLEY ENVIRONMENTAL IMPACT REVIEW BOARD

THOR LAKE RARE EARTH ELEMENT PROJECT

AVALON RARE METALS INC.

EA1011-001

TECHNICAL SESSION

Facilitator Paul Mercredi

Facilitator Simon Toogood

HELD AT:

Tree of Peace

Yellowknife, NWT

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Day 3 of 4

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8 Simon Toogood)

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12 David Swisher)Avalon Rare Metals

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14 Henrietta Notzl (np))

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16 Kelly Cumming (np))

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14 Carey Sibbakel (np)) Stantec

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16 Ralph Grismala (np)) ICF International

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23 Ralph Grismala (np)) ICF Marbek

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25 Michael Tollis) LKDFN

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3 Ron Carmichael) self

4

5 Louie Azzolini) self

6

7 Gloria Shearing) self

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1 LIST OF COMMITMENTS (Con't)

1 LIST OF UNDERTAKINGS

1 --- Upon commencing

2

3 THE FACILITATOR MERCREDI: Good

4 morning everyone and welcome back to the technical

5 session for the Thor Lake Rare Earth Element Project.

6 Thank you for -- thank you, everyone, for showing up.

7 And I'm going for a switch of pace here. My

8 colleague, Simon Toogood, will be facilitating for all

9 day actually, so he will get some mic time. And I'm

10 just introducing him. So with that -- with no further

11 ado, we have Simon Toogood. And we will be launching

12 into homework items right away as well, so. Simon?

13 THE FACILITATOR TOOGOOD: Thank you,

14 Paul. As you mentioned, we're on day 3 of the

15 technical session. We'll be going through some

16 homework first, but just to cover off what we'll be

17 doing today, we're going through SARA species,

18 waterfowl and other wildlife. That will take us into

19 the afternoon. Then we'll cover accidents and

20 malfunction, then go into mine waste management, waste

21 rock and tailings at both sites, and then closure and

22 reclamation.

23 I guess just to reiterate a couple of

24 housekeeping points -- and I think everyone -- same

25 faces I see here today. But as you know we are --

1 this is being recorded and there's a transcript, so
2 please state your name and your organization when you
3 are on the mic. And again, please don't, as Paul
4 would say, eat the mic. You don't have to talk too
5 loudly.
6 And I guess with that we'll just move
7 into homework items from yesterday. And I believe
8 there was three (3) homework items, and if we can let
9 Avalon talk to those.
10 MR. DAVID SWISHER: David Swisher
11 with Avalon. Good morning. The homework item number
12 9, which was:
13 "Avalon to provide an update of
14 Table 1 in Attachment 3 of Avalon's
15 May 10th submission to predict the
16 max LC-50 concentration for years 1
17 through 20."
18 We have that table updated. It's in
19 the response that we'll be sending to the Review Board
20 as -- right after the -- the review here.
21 Homework item number 10 was:
22 "Avalon to provide an update of
23 Table 6.4-2 of the DAR to include
24 updated information of the zinc
25 concentration and trasher --tracer

1 concentrations."
2 We have that table updated as well and
3 will also be submitted in the same memo documentation
4 to the Review Board.
5 Lastly, homework item number 11 was:
6 "To provide higher resolution images
7 of the proposed changes to the
8 tailings management facility."
9 Those two (2) images were forwarded to
10 the Review Board last night for posting to public
11 registry. This memo will be emailed to the -- to Paul
12 Mercredi imminently. Thanks.
13 THE FACILITATOR TOOGOOD: Thank you
14 very much. I guess that covers off the homework items
15 if there's no questions or concerns from anyone in the
16 audience.
17 No? I guess we can move on to the
18 first item of the day, which is SARA species,
19 waterfowl and other wildlife. I believe there was a
20 short presentation on that?
21 MR. DAVID SWISHER: David Swisher --
22 THE FACILITATOR TOOGOOD: Oh, sorry --
23 MR. DAVID SWISHER: -- with Avalon.
24 THE FACILITATOR TOOGOOD: Can we just
25 -- one moment, please. I believe there was a question

on the homework items.

MR. RALPH GRISMALA: Ralph Grismala, ICF Marbek. I have a few questions or comments on the homework items that were presented yesterday from the homework items from day 1. And if this is an appropriate time, I'd like to discuss those so we can clear those up?

THE FACILITATOR TOOGOOD: It's -- it is an appropriate time. Thank you. Go ahead.

MR. RALPH GRISMALA: All right. The first item in the discussion yesterday, there was a question about the rare earth element parameters for the water quality tests at the Pine Point area. And I believe in the -- in the testimony, Avalon said they were in the May 4th memo that was submitted to the Board.

I looked at the May 4th memo on the registry; there are -- there was a sampling program that included seven (7) wells, but they were at the Nechalacho site. Six (6) of them were not accessible or frozen, and the seventh had data but did not include rare earth data.

So I would like clarification from Avalon on whether there is rare earth element water quality parameter measurements at the Pine Point site,

1 and if so, where to find that data.
2 THE FACILITATOR TOOGOOD: Thank you,
3 Ralph. Avalon, I'll hand it over to you.
4 MR. RICHARD HOOS: Hey, Ralph. Rick
5 Hoos here, Avalon. We did have a little bit of a
6 sidebar on this before and we -- then we did some more
7 checking. But Ralph was talking about the Nechalacho
8 site, and he was talking about groundwater wells that
9 had been sampled by Knight Piesold. And -- and you
10 mentioned that several of them -- well, there was no
11 samples collected from a number of them, because it
12 was very early in the year and -- and they were
13 actually frozen. They were able to get one (1) water
14 sample, you're correct, and that was analyzed for
15 REEs.
16 But as -- as people have heard over the
17 last couple of days, there was another groundwater
18 sampling program conducted by Stantec for a different
19 set of wells in the same general area in the month of
20 April. And those data did include REEs at Nechalacho
21 for all the groundwater wells that they sampled, and
22 they were able to sample many more than -- than Knight
23 Piesold did.
24 Those data have been presented and are
25 on the -- on the site. And if -- I can't recall right

1 offhand the date of the Stantec note, but I know it
2 was actually in one (1) of the IRs that we had
3 responded to. We had to provide those data. Stantec
4 also collected a lot of surface water quality as well
5 at the time, and REEs we done on those as well.
6 So turning to Pine Point then, Knight
7 Piesold did also sample for REEs at Pine Point in late
8 April. They did produce a -- a memo on that subject;
9 it sounds like the same day as the -- the memo they
10 produced for Nechalacho. And it appears that perhaps
11 that second report related to Pine Point may not have
12 reached the registry.
13 And we've dug it up here, and I notice
14 that Dave has it here next to me, and he'll be
15 forwarding it to Paul's attention very shortly, I'm
16 sure.
17 THE FACILITATOR TOOGOOD: Thank you
18 very much. The timing of that, will you be sending
19 those reports or memos or the data, I suppose, to the
20 Review Board shortly today, or is that a homework item
21 potentially? I'd just like to clarify when the Review
22 Board will get that.
23 MR. DAVID SWISHER: David Swisher,
24 with Avalon. It should be in your inbox now.
25 THE FACILITATOR TOOGOOD: Thank you

1 very much. With that, you'll be seeing it on the
2 registry shortly. Ralph, did you have any follow-up
3 questions?
4 MR. RALPH GRISMALA: I did. Ralph
5 Grismala, ICF Marbek. In yesterday's response to the
6 day 1 homework number 5, Avalon presented some simple
7 calculations of the -- the -- to calculate the
8 concentrations from the TMF.
9 In reviewing those calculations, I had
10 a few questions on some of the data that went into
11 those -- into those numbers or into those
12 calculations. In particular, the table in the
13 response shows the water volume in the TMF as roughly
14 2.4 million cubic metres. The DAR shows a volume of
15 the supernatant pond in the TMF in year 1 with a
16 minimum volume of 179,000 cubic metres and change and
17 a maximum volume of 250,000 cubic metres, which is
18 about an order of magnitude lower than the number that
19 was in the table in the response to homework number 5.
20 Clearly the -- the -- you know, the --
21 the volume affects the dilution ratio, so we just ask
22 for a clarification of that from Avalon.
23 THE FACILITATOR TOOGOOD: Thank you,
24 Ralph. Does Avalon care to respond?
25 MR. DAVID SWISHER: David Swisher,

1 with Avalon. Yes, we had a sidebar with Ralph
2 earlier. And the response we had based on Dr.
3 Stronach's model was that the model was taken after a
4 steady-state period, which would have been reflected
5 potentially several years after startup so that then
6 it contained a -- a steady-state, continuous stream
7 from the -- the -- the tailings management basin.
8 It also would not be reflective of the
9 larger amounts of water that would be already
10 encapsulated within the TMF in -- in the earlier year,
11 say the first several years of operations. So that
12 was taken. The model was -- was formulated taken at a
13 steady state after several years had gone by, that --
14 that assumption, so that it created this steady-state
15 flow from the TMF, which we also know is not going to
16 be the case, but it was modelled as such as a worst-
17 case scenario.
18 As we know, we're not going to be
19 discharging -- as we've already mentioned earlier in
20 the week -- during the months of -- I think it's
21 December to April, Kev? And then so it won't be a
22 steady-state flow coming out of the TMF.
23 So those were the modelling parameters.
24 They had to choose a point at which to make those
25 assumptions. So they made those assumptions after

1 assuming a good portion of the tailings management
2 facility were filled and then the -- the pond, if you
3 will, was significantly smaller than what would be
4 representative in the first several years of the
5 operation.
6 THE FACILITATOR TOOGOOD: Thank you
7 very much. Ralph...?
8 MR. RALPH GRISMALA: Ralph Grismala,
9 ICF Marbek. So if I understand your response
10 correctly, although the table was labelled, you know,
11 year 0, year 0.5, year 1, it's not actually at that
12 point in the process. So, you know, perhaps we can
13 have -- well, I -- I guess -- I guess we have
14 clarification now of that. I think that part is fine.
15 I had another question on those
16 calculations. In that same table it had values for 'Q'
17 in and 'Q' out signifying flow in and flow out of the
18 TMF. But it did not account for water that was
19 captured in the TMF in the void space of the tailings
20 itself, which is a significant percentage of the water
21 that flows in. So I think that affects your
22 calculation somewhat.
23 I -- I guess in general, because of the
24 various questions we've had on the model, it would be,
25 I think, useful to the Board if we had, you know, more

1 detail on the input parameters, you know; more
2 specifically, where those numbers come from that, you
3 know, that we could, you know, trace back to source
4 documents, for example. And, you know, enough --
5 enough detail that somebody could replicate the
6 calculations independently to verify that everybody is
7 in agreement with those numbers.
8 MR. DAVID SWISHER: David Swisher,
9 with Avalon. Not -- it shouldn't be a problem. I
10 think we would suggest it be an undertaking, since Dr.
11 Stronach is no longer with us and we would be unable
12 to provide that information this week. So as an
13 undertaking, we certainly can provide those bullet-
14 point items from those parameters before the 31st.
15 THE FACILITATOR TOOGOOD: Thank you
16 very much, David. I'll look at our scribe for today,
17 Shannon Hayden, to hopefully capture the wording.
18 MS. SHANNON HAYDEN: Thanks. It's
19 Shannon with the Review Board. Can you, for, me just
20 explain what those parameters are so I can put it?
21 Thanks.
22 MR. DAVID SWISHER: David Swisher,
23 with Avalon. It's not specific parameters; it's
24 looking for the -- the backup data. And Ralph can
25 correct me if I'm wrong. David Swisher here. It's

1 the backup bullet-point parameters, I guess, that went
2 into the model and assumptions that went into the
3 model.
4 MR. RALPH GRISMALA: Ralph Grismala,
5 ICF Marbek. Yes, I think that's correct. I -- I
6 guess what we're looking for is for every, you know,
7 flow volume that's using the calculation, you know, we
8 need the volume number, the source of that flow, and
9 the concentration associated with that. And that
10 would be the flows in and flows out.
11 THE FACILITATOR TOOGOOD: Thank you,
12 Ralph. And once again I'll check with Shannon and see
13 we have the wording down.
14 MS. SHANNON HAYDEN: Thanks. Shannon,
15 with the Review Board. I'm not sure if I caught in so
16 I'll just read it and maybe you can help me reword it.
17 I have, "Avalon will provide, in bullet format, the
18 backup data parameters and assumptions used for," I
19 just have, "the model," I don't know if there's a
20 better way to explain that, "including volume number,
21 source of flow, and concentration."
22 MR. RALPH GRISMALA: Ralph Grismala,
23 ICF Marbek. I think in -- instead of "the model,"
24 perhaps you should reference the simple calculations
25 that were the response to homework number 5 from day

1, unless Avalon would like to do it for the entire model, which is a lot more detailed. I -- I see heads shaking, so leave it with homework number 5.

THE FACILITATOR TOOGOOD: Thank you, Ralph. And now I'll see if we've captured this one.

MS. SHANNON HAYDEN: Okay. "Avalon will provide" -- sorry, this is Shannon with the Review Board.

"Avalon will provide, in bullet format, the backup data parameters and assumptions used for the calculations from homework number 5, including volume number, source of flow, and concentration."

MR. RALPH GRISMALA: Ralph Grismala, ICF Marbek. That's correct. Thank you.

--- UNDERTAKING NO. 4: Avalon will provide, in bullet format, the backup data parameters and assumptions used for the calculations from homework number 5, including volume number, source of flow, and concentration

1 THE FACILITATOR TOOGOOD: Thank you,
2 Ralph. Further questions?
3 MR. RALPH GRISMALA: Yes. Ralph
4 Grismala, ICF Marbek. In the discussions, I believe,
5 on day 1, Avalon stated that the amount of tailings
6 which would be converted into paste backfill were
7 approximately 1,000 tonnes per day, and the remaining
8 600 tonnes per day would go to the management
9 facility.
10 The Golder report has now been posted
11 on the registry. And looking at the information,
12 design considerations, and the quantities presented
13 there, it appears as though 1,200 tonnes per day would
14 be converted to paste-backfill, and 400 tonnes per day
15 would go to the tailings management facility. The
16 volume that goes to the tailings management facility
17 obviously affects the concentrations in that facility
18 and the concentrations downstream.
19 So we'd just like clarification on
20 those numbers and, if they need to be corrected, you
21 know, corrections from Avalon.
22 MR. DAVID SWISHER: David Swisher,
23 with Avalon. We're not going to be correcting
24 Golder's detailed report or assumptions. The 75
25 percent at 1,200 tonnes per day is a steady-state

1 operation but does not reflect the startup during
2 operations. It al -- also only reflects 75 percent
3 utilization, whereas during the startup you typically
4 have less than that in the utilization. So what was
5 presented to the Review Board, again, was conservative
6 and, I think, should be noted as Avalon being
7 conservative or looking at worst-case scenarios with
8 regards to potential impacts on this project.
9 We absolutely will be striving to
10 achieve 1,200 tonnes per day into the underground
11 environment, which should be viewed as a -- as a
12 positive, because it just means less tailings to the
13 tailings management facility. Thank you.
14 THE FACILITATOR TOOGOOD: Thank you,
15 David. And it is noted that, you know, these are
16 conservative assumptions and calculations. Ralph, any
17 follow-up?
18 MR. RALPH GRISMALA: Ralph Grismala,
19 ICF Marbek. So for purposes of calculating downstream
20 concentrations the numbers that you reported of the
21 1,000 tonnes per day are conservative assumptions, and
22 -- and we understand that. But if people were looking
23 at the volumes that are more likely to actually go to
24 -- into the underground space 1,200 tonnes per day
25 would be a more reasonable number long term once

1 you're up and running.
2 Is that correct?
3 MR. DAVID SWISHER: David Swisher,
4 with Avalon. Again, I -- I -- I'm not sure if you've
5 dealt with paste backfill plants before, but having
6 dealt with paste backfill plants in the past from an
7 operation standpoint, I am comfortable with Golder's
8 analysis. Operationally, I'm not comfortable
9 committing to that ideal ratio of 1,200 tonnes per day
10 at this stage. I'm comfortable committing to 1,000
11 tonnes per day as, indicated in the -- in the
12 presentation.
13 Obviously, we're going to be optimizing
14 or trying to make sure that we meet those design
15 parameters that Golder has indicated we can meet, but
16 I would not commit to 1,200 tonnes per day at this
17 stage.
18 MR. RALPH GRISMALA: Ralph Grismala,
19 ICF Marbek. Thank you for that clarification.
20 Related to the paste backfill, in the DAR Figure 4.7-
21 10, which is the water balance for the Nechalach --
22 Nechalacho site, there is a arrow that shows the water
23 loss due to paste backfill, and there's no volume
24 associated with that; it simply says, "N/A."
25 It appears you have more updated

1 information so that since you are updating the water
2 balance, I -- I simply ask that that number -- you
3 know, that current numbers be included in that -- in
4 that flow path.
5 MR. DAVID SWISHER: David Swisher,
6 with Avalon. Yes, Avalon will be including all of
7 those numbers in the Undertaking number 1, revised or
8 updated water balance.
9 MR. RALPH GRISMALA: Ralph Grismala,
10 ICF Marbek. Thank you very much, Mr. Chairman; I have
11 no more questions.
12 THE FACILITATOR TOOGOOD: Thank you
13 very much. Are there any other questions from the
14 audience on the homework items? I see -- no? Perhaps
15 we could just check the lines this morning. I'm
16 seeing that no, there's no one on the line. No.
17 Sorry, I think I missed an item this
18 morning when I was introducing everyone. Perhaps we
19 could have a roundtable of who's here for the -- for
20 the transcript. And I'll start off. Simon Toogood,
21 with the Review Board.
22 MR. PAUL MERCREDI: Paul Mercredi,
23 Environmental Assessment Officer with the Review
24 Board.
25 MR. RALPH GRISMALA: Ralph Grismala,

1 ICF Marbek, technical assistance to the Review Board.
2 MS. SHANNON HAYDEN: Shannon Hayden,
3 with the Mackenzie Valley Review Board.
4 MS. SARAH-LACEY MCMILLAN: Sarah-Lacey
5 McMillan, with Environment Canada.
6 MR. JAMES HODSON: James Hodson, with
7 the Canadian Wildlife Service of Environment Canada.
8 MR. ALBERT BOURQUE: Albert Bourque --
9 excuse me -- Regional Environmental Assessment
10 Coordinator, Government of Northwest Territories,
11 Environment/Natural Resources.
12 MR. KEVIN HAWTON: Kevin Hawton, with
13 Knight Piesold, working with Avalon on tailings and
14 water management.
15 MR. MARK WISEMAN: Mark Wiseman,
16 Avalon.
17 MR. DAVID SWISHER: David Swisher,
18 with Avalon.
19 MR. RICHARD HOOS: Rick Hoos, with EBA
20 but also representing Avalon.
21 MR. GAVIN MORE: Gavin More, GNWT.
22 MR. RUSSELL TEED: Russell Teed, GNWT
23 Minerals, Oil, and Gas.
24 MR. SHAFI KHOURI: Good morning.
25 Shafi Khouri, GNWT.

1 MR. LIONEL MARCINKOSKI: Good morning.
2 Lionel Marcinkoski, Aboriginal and Northern Affairs,
3 ENC.
4 MR. MICHAEL TOLLIS: Good morning.
5 Mike Tollis, Lutsel K'e Dene First Nation.
6 MS. KELLY CUMMING: Kelly Cumming,
7 Avalon Rare Metals.
8 MS. BRITTANY SHUWERA: Brittany
9 Shuwera, GNWT.
10 MR. PATRICK SIMON: Good morning.
11 Patrick Simon, Deninu Kue First Nation.
12 MS. SHANNON GAULT: Shannon Gault,
13 YKDFN.
14 THE FACILITATOR TOOGOOD: Thank you
15 very much. Before we move into our first topic today,
16 I'd just like to remind people that there is a sign-in
17 sheet and, please, if you're -- could you please sign
18 in?
19 With that, we'll be moving on to SARA
20 species at risk, water fowl, and other wildlife. And
21 I believe Avalon has a presentation, so I'll pass it
22 over to Avalon. Hit the mic as well.
23
24 SARA SPECIES, WATERFOWL, AND OTHER WILDLIFE:
25 PRESENTATION BY AVALON:

1 MR. RICHARD HOOS: Can't see with my
2 glasses; can't see without them in the dark. Anyway,
3 good morning everybody. Today we're -- this
4 particular presentation is going to be focussing very
5 briefly on some of the wildlife species and whatnot
6 that are found in the area. We're doing a wildlife
7 review at this point.
8 When -- in doing the assessment for
9 wildlife, vegetation, and various other biological and
10 environment parameters, the baseline work that had
11 been done -- and it was begun several years ago, 2008
12 or '09 or thereabouts, by Stantec. EBA became
13 involved a couple of years later. And together we
14 have done a number of years of work at the site.
15 And for purpose of the assessment, we
16 had selected a local study area, which looks a bit
17 like a large tadpole, basically encapsulates the
18 entire proposed project area, including the road
19 access to a dock site. And this is about 5 kilometre
20 by 5 kilometre size area. And I can actually give you
21 the hectares. It's about 2,184 hectares.
22 Surrounding that is a larger regional
23 study area, about 15 kilometres in radius, covering
24 about 44,000 hectares. And it was those two (2) study
25 areas that were used as the basis for the assessment

1 at Nechalacho.

2 In terms of the valued ecosystem

3 components, we're not covering all of these today

4 obviously, but we did address issues related to air

5 quality, water quality, fish and aquatic resources,

6 terrestrial vegetation, and wildlife.

7 And the primary wildlife species that

8 we looked at were moose, both barren-ground and

9 woodland caribou. They do not actually occur at

10 Nechalacho -- woodland caribou, that is -- but they do

11 at the other site, so we had to end up looking at

12 species at both locations of course. Black bear, fur

13 bearers, breeding birds, raptors, and the SARA list of

14 species. And I know that the focus of today's meeting

15 is primarily on SARA list of species, but we may end

16 up talking about other wildlife as well.

17 So, just a -- a very quick one on -- on

18 the vegetation of the area. It's not a very easy to

19 read figure, but needless to say we did do ecosystem

20 and vegetation classification. They're basically

21 broad -- eleven (11) broad vegetation ecosystem units

22 in the area, and about fourteen (14) kinds of

23 vegetation habitat in the area. And they've all been

24 quantified down to the square metre, and that

25 information has been used throughout the DAR process

1 and even more so in response to some of the
2 Environment Canada IRs that followed.
3 In terms of vegetation, obviously the
4 primary impacts on vegetation will occur during the
5 site preparation and construction phase, where there
6 will be direct losses of vegetation as a result of the
7 project footprint. But, of course, in order to
8 minimize the effects due to losses from footprint, the
9 idea and the design of the project has been to limit
10 the size of the project footprint to the extent
11 possible.
12 We have also, in the context of
13 mitigation, where -- where there is salvageable
14 minerable -- mineral topsoils, that will be done and
15 erosion control measures of course will also be
16 implemented as necessary.
17 The project has been designed to avoid
18 development on any rare ecosystem types, but
19 fortunately there haven't been really any found on the
20 site. During the scoping sessions, we did talk about
21 one (1) little plant, ponapotee (phonetic) plant,
22 which was located -- which we noticed in the Long Lake
23 area on a north-facing rock slope. It's not a rare
24 plant at all, but it is a -- a less-common plant in
25 this part of the -- the North because it's at its

1 northern extent of its range. But that plant will not
2 be impacted in any way, shape or form by development.
3 And, of course, dust suppressants,
4 mostly water, will be used throughout the site
5 preparation, construction, and, for that matter, the
6 operations phase.
7 And during the operations phase, the
8 primary issues that could affect vegetation at that
9 point are -- are related to air emissions and dust
10 generation. This will be a subject that will be
11 covered more tomorrow. But suffice to say, the intent
12 is to conform with not only the guidelines for ambient
13 air quality, but also con -- continue to use dust
14 suppressants in accordance with the GNWT dust
15 suppressant guidelines, and of course conduct
16 progressive site reclamation when opportunities arise
17 to do so.
18 So turning to wildlife, a few shots of
19 things like wolf tracks, grouse, and woodpecker holes
20 and whatnot. There are various kinds of wildlife in
21 the area. One that is usually of great concern and
22 great interest is the barren-ground caribou
23 population, the Bathurst herd that moves from
24 wintering areas. This is actually a -- an image of
25 their -- their wintering area based on more than ten

1 (10) years of satellite collar data right up to -- I
2 think this was 2011 when this was finally put
3 together. You can't tell the different colours, but
4 the different colours represent where they were in
5 different years.
6 And what you notice here that -- is
7 that even their -- during -- when they're in their
8 winter range, they come very close to the Nechalacho
9 site. And it's reasonable believe -- to believe that
10 at times they -- some caribou from the Bathurst herd
11 may be in this area. But in general, their -- even
12 their winter range is -- is essentially away from the
13 Thor Lake Nechalacho site. And of course, none occur
14 around Pine Point. For the rest of the year the --
15 the Bathurst caribou are north of this location, and -
16 - and they're simply not around Thor Lake or even a
17 chance of them being around Thor Lake for most of the
18 year.
19 Peregrine Falcons, just a little matter
20 of interest, there are no nesting sites for Peregrine
21 Falcons around either Nechalacho or in -- in the
22 general Pine Point area. However, what this image
23 does show is the basic -- some of the preferred sites
24 for nesting of -- of Peregrines, which is mostly in
25 areas of cliffs.

1 We did also become aware, during the
2 scoping sessions, Tom Unca of Fort Res had mentioned
3 that he had seen some Peregrines nesting in one of the
4 old abandoned mine pits at Pine Point. Again, I guess
5 the pres -- they represent sort of a cliff habitat,
6 and some crafty Peregrine was in there nesting.
7 Woodland caribou, they do not occur in
8 the Nechalacho area, but they may occur in the area
9 around the hydromet plant. And we describe them as
10 being there in low numbers and able to occur there at
11 that area year round. However, they calve in upland
12 wooded areas, which are certainly not present in the
13 project area. They are also one of the SARA-listed
14 species.
15 Wood Bison is another SARA-listed
16 species that occurs in the general area. There is a
17 bison control area, a very large bison control area on
18 the south side of Great Slave Lake. The actual
19 project is located here. There is also Wood Bison of
20 course in Wood Buffalo National Park. Some of these
21 bison could be located from time to time in the
22 general area of the hydromet plant, and the company
23 will do its best to simply not disturb them.
24 Whooping Cranes, another very important
25 species, endangered under list -- in the SARA list.

1 They are known -- they -- they have a very active
2 nesting area in Wood Buffalo National Park. We're
3 pleased to be able to report, as Park Canada has done,
4 that the Wood Buff -- that the Whooping Crane
5 population has been growing of the years. Most
6 recently in 2010, there were about seventy-four (74)
7 pairs in Wood Buffalo National Park. A few years
8 earlier it was sixty-four (64), and in 2005 it was
9 fifty-eight (58). The number of chicks that have been
10 fledging have been increasing from year to year as
11 well. That's all good stuff and very important.
12 The nearest known Whooping Crane nest
13 site in relation to the hydromet facility is about 20
14 kilometres south, just on the northern edge of Wood
15 Buffalo National Park. And we have actually observed
16 one (1) non-breeding, otherwise known as juvenile,
17 Whooping Crane about 17 kilometres to the we -- to the
18 west of the hydromet plant during one (1) of our
19 surveys.
20 Moving on. This is kind of a summary
21 basically for how we intend to try and protect
22 wildlife in relation to the development and operation
23 of the project.
24 During the site preparation phase, of
25 course, there will be some disturbance and removal of

1 some wildlife habitat. But by minimizing the
2 footprint, maximizing the use of existing disturbed
3 terrain, particularly at Pine Point, and avoiding
4 sensitive areas, we -- we -- we will be able to
5 effectively protect wildlife habitat to the extent
6 possible.
7 With the underground mining, of course,
8 no impacts are expected because it is all underground.
9 The only thing that does come to the surface is some
10 mine water, which we discussed the other day, and some
11 air emissions mostly related to ventilation from the
12 mine, which will be discussed tomorrow.
13 Process wastes: Apart from the
14 tailings management facility, all other reagents and
15 other wastes associated with the operation will be
16 contained and ens -- and stored appropriately and
17 disposed of in an approved manner, as necessary.
18 In terms of solid wastes and hazardous
19 wastes, we're going to be doing our best not to
20 attract wildlife to the plant site. And I don't
21 believe you're having a landfill site at either
22 location, so that will help ensure that that doesn't
23 occur.
24 And in terms of other infrastructure,
25 in terms of the buildings -- and I know that we've

1 talked to Environment Canada about this in the past --
2 they will be designed to again ensure that they don't
3 serve as -- or, that we minimize opportunities for
4 nesting or -- or wildlife collecting underneath
5 buildings and things of that nature.
6 And other wildlife protection measures,
7 as have been described in a draft wildlife management
8 plan that has been provided to the Board, will be
9 employed. Wildlife will always have the right of way.
10 There will be no hunting allowed by employees on the
11 work site, and all those kind of standard mitigation
12 measures will be employed to make sure that wildlife
13 are protected.
14 And basically it's Avalon's view -- our
15 view, as consultants for Avalon, that with the
16 application of sound engineering, environmental
17 planning, and best management practices, and with the
18 help of our Aboriginal partners and colleagues, and
19 compliance with anticipated permits, licences,
20 approvals, et cetera, et cetera, et cetera, that the
21 environmental concerns associated with the development
22 and operation of the Thor Lake project can and will be
23 effectively addressed.
24 We'll be talking about closure
25 tomorrow. But, of course, we also feel that Avalon's

1 goals for closure and reclamation, which will be
2 consistent with all existing guidelines, including
3 those of now AANDC and the GNWT, will be in accordance
4 with their requirements as well as those of -- of the
5 anticipated land use permit. And the project will be
6 an environmental success story, as well as a success
7 story for the Northwest Territories.
8 Thank you very much. And with that
9 brief introduction, we'll be pleased to go for -- go
10 forward through the rest of the morning, I believe, on
11 wildlife-related issues. Thank you.
12
13 QUESTION PERIOD:
14 THE FACILITATOR TOOGOOD: Thank you
15 very much for the presentation/introduction. And I
16 think we'll move to -- we'll move to questions for
17 Avalon. I'll open up to the floor. I'm looking at
18 Environment Canada. Do you have any questions?
19 MR. JAMES HODSON: This is James
20 Hodson, with Canadian Wildlife Service. I was just
21 noticing on the figures that you provided in your
22 presentation there that the local study area didn't
23 actually include the tailings management facility in
24 that outline there.
25 And I'm just wondering if you could

1 maybe talk about whether you've done any additional
2 surveys, ground or aerial surveys, for wildlife in
3 that tailings management facility area just to
4 document what wildlife is using that area before
5 construction starts.
6 MR. RICHARD HOOS: Jason (sic), you're
7 very observant and you're very correct.
8 UNIDENTIFIED SPEAKER: And who are
9 you?
10 MR. RICHARD HOOS: Sorry, Rick Hoos.
11 I -- I might get this right before this session is
12 over; I'm not sure. I do -- do apologize for it. I
13 didn't even, myself, notice that that figure was not
14 the updated one that's actually in the DAR.
15 In 2010 EBA was contracted to -- to
16 extend that study area to wrap around and -- and go
17 beyond the -- the tailings management area, which had
18 -- had moved to that location, as well as there were
19 some expansions on the south side of the study area as
20 well to address a larger study area. And the work was
21 done consistently with that done by Stantec, and
22 that's what's represented in the -- the DAR, and that
23 was what used for the assessment. Thank you.
24 MR. JAMES HODSON: Okay, thanks for
25 that clarification. It's James Hodson again with the

1 Canadian Wildlife Service.
2 So one (1) of the concerns that we
3 raised in our Information Request number 12 was about
4 the timing of vegetation clearing and whether there
5 would be any changes or dewatering necessary of those
6 water bodies within the tailings management facility
7 and I -- your answer to that question was that there
8 wouldn't be any dewatering necessary. But I guess
9 it's still a bit unclear for me what the sequence and
10 timing of construction activities will be for that
11 tailings management facility.
12 And I'm just wondering, is there going
13 to be any sort of site preparation of the terrestrial
14 habitat within that area or are you just building the
15 -- sort of the...
16 UNIDENTIFIED SPEAKER: Yeah, the --
17 the berm?
18 MR. JAMES HODSON: Yeah, the berm
19 around it and then starting to deposit tailings
20 directly over top of the vegetation and the water
21 bodies that are in that area.
22 So if you could just clarify sort of
23 the sequence of events that will go on during the
24 construction of the tailings facility, that would be
25 good. Thanks.

1 MR. DAVID SWISHER: David Swisher,
2 with Avalon. Yeah, part of our commitment too is to -
3 - to minimize any clearing during any potential
4 nesting season. And so we -- in our plans, as you
5 mentioned, in construction would be to -- of the
6 tailings management facility would be to clear
7 anything inside of that zone during the winter or in
8 the spring prior to the May 15th, kind of, deadline.
9 And I think we committed that after May 15th, if there
10 was any clearing, that we would have a wildlife
11 specialist with us at the time.
12 So that -- that is the plan for the
13 construction activities within the tailings management
14 facility. And Kevin can answer the question with
15 regards to the -- the -- the water in the tailings
16 management facility in the first couple of years of --
17 of operations, what -- what happens there.
18 MR. KEVIN HAWTON: Kevin Hawton, with
19 Knight Piesold. Basically for construction, there --
20 there's virtually no dewatering of the existing lakes.
21 The foundations that we encountered were all good and
22 high -- high enough that we don't have to do that.
23 Some minor local dewatering at the dam sites, but it
24 won't affect the lakes.
25 And then during the first couple years

1 of operations, basically as the tailings are being
2 deposited in the facility, the water will just be
3 displaced as we release effluent to the environment.
4 MR. JAMES HODSON: Okay, just a
5 follow-up then, I guess. So those ponds will be left
6 intact, and I guess there is a remote possibility that
7 wildlife could continue to use them as you start to
8 deposit tailings.
9 So what kind of monitoring program do
10 you envisage for the tailings management facility,
11 just to ens -- ensure that wildlife are protected as
12 that area gets established?
13 MR. DAVID SWISHER: David Swisher,
14 with Avalon. Yeah, during operations, we're going to
15 have EHS personnel on site. And, you know, part of
16 our monitoring activities is to monitor that facility
17 daily to ensure that, one (1), there's inspection of
18 the infrastructure itself is -- is stable, intact;
19 report on any anomalies if there are any; as well as
20 report on any wildlife sightings. And I think we've
21 also committed to -- at the site, to report to the
22 GNWT any wildlife sightings in the area as well, just
23 as we've had during the exploration program there at
24 the site the last several years.
25 MR. RICHARD HOOS: Rick Hoos, with

1 Avalon. I just wanted to also mention that in
2 response to one (1) of Environment Canada's requests,
3 we've tabled a conceptual wildlife effects monitoring
4 and management plan, and that -- that plan is -- is
5 with you folks. And it has a section on the kind of
6 monitoring that we are proposing to be undertaking:
7 general wildlife monitoring; monitoring for species at
8 risk, in particular, raptors; and monitoring of the
9 effects of habitat loss modification and any
10 progressive reclamation that'll be undertaken.
11 But it's all outlined in this
12 conceptual plan, and I guess Avalon would be looking
13 forward to any comments that Environment Canada and
14 others may have on that plan at the appropriate time.
15 MR. JAMES HODSON: Okay. James Hodson
16 with Canadian Wildlife Service. Thanks for that
17 clarification. I guess it kind of covers my questions
18 for the moment, but I -- I might have some more as --
19 maybe come back to me a bit later.
20 THE FACILITATOR TOOGOOD: Thank you
21 very much. We have some questions from Ralph.
22 MR. RALPH GRISMALA: Ralph Grismala,
23 ICF Marbek. Just a clarification, I'm not sure I
24 heard some of the numbers correctly. Could you
25 restate the radius in the area of the regional study

1 area?

2 MR. RICHARD HOOS: It's about a 15-

3 kilometre radius.

4 MR. DAVID SWISHER: Rick Hoos.

5 MR. RICHARD HOOS: Rick Hoos.

6 MR. RALPH GRISMALA: Ralph Grismala,

7 ICF Marbek. And the area?

8 MR. RICHARD HOOS: Rick Hoos. The

9 answer is 44,000 hectares. It's approximately a 15-

10 kilometre radius. Local study area is 2,189 hectares,

11 and it's an area of approximately 5 x 5 kilometres.

12 MR. RALPH GRISMALA: Ralph Grismala,

13 ICF Marbek. Thank you.

14 THE FACILITATOR TOOGOOD: Okay. It

15 looks like ENR has some questions. Albert?

16 MR. ALBERT BOURQUE: Albert Bourque,

17 ENR. Has there been any thought given to preventing

18 access to the standing water in the tailings

19 management facility and polishing area to prevent

20 access by moose, particularly in summer?

21 MR. DAVID SWISHER: David Swisher,

22 Avalon. I believe in the operational plans that we

23 have for the environmental health and safety personnel

24 that we plan on hiring at the site is to -- with the

25 frequent and daily access and inspections that we'll

1 be doing or committing to, to the tailings management
2 facility, that that in itself will help mitigate any
3 wildlife intrusion.
4 We also have the last five (5) years of
5 experience out at the site with regards to any
6 potential wildlife in the area. And we've just not
7 experienced out there -- very little, if any, moose
8 activity in that region. We tend to see more activity
9 as we go into maybe some of the larger lakes there.
10 But from the exploration program and what they've
11 noted over the last five years, there hasn't been a
12 whole lot of activity, with the exception of an
13 occasional bear that does come in every now and again
14 that we need to chase off.
15 MR. ALBERT BOURQUE: Albert Bourque,
16 Environment and Natural Resources. I see in your
17 waste management program that you intend on
18 transporting your domestic waste from the hydromet
19 facility to the Hay River landfill. This is something
20 the Board should consider too, that the municipal
21 landfills are licensed under a Type A water licence
22 for disposal of waste generated within the
23 jurisdictional boundaries of the municipality, and
24 there would -- you know, an amendment to their
25 existing water licence would be required for them to

1 accept industrial waste generated off site.
2 There was a recent ruling through the
3 Sahtu Land and Water Board that actually spent a fair
4 bit of time exploring this issue, because it's -- you
5 know, for the Government of Northwest Territories and
6 the lands that they're responsible for, the
7 Commissioner's lands, it's a question of long-term
8 liability and knowing what goes into the landfills,
9 just for an FYI.
10 THE FACILITATOR TOOGOOD: Thank you,
11 Albert. Avalon, do you have any follow-up? No.
12 Further questions, Albert?
13 MR. ALBERT BOURQUE: I guess the --
14 Albert Bourque, ENR. I guess the follow-up to that
15 would be: Has any thought been given to disposing of
16 combustible waste at the hydromet facility in the same
17 manner that has been considered at the Thor Lake site,
18 you know, in compliance with the -- the new batchways
19 (phonetic) combustion guidelines?
20 MR. DAVID SWISHER: David Swisher,
21 Avalon. Absolutely. You know, we're -- we're looking
22 at disposing of all combustibles in the same manner
23 for both sites.
24 MR. ALBERT BOURQUE: Albert Bourque.
25 Thank you for that.

1 THE FACILITATOR TOOGOOD: All right.
2 Is there any further questions on wildlife. It looks
3 like Gavin More does.
4 MR. GAVIN MORE: Gavin More, GNWT.
5 It's not a question. I just want to bring you up-to-
6 date on species at risk. On July 7th, there was a new
7 posting for species put on SARA 1. So for Peregrine
8 Falcon it is now down-listed to special concern. The
9 two (2) subspecies have been put together.
10 There is an error in that version, of
11 course, because they accidentally left anatum on as
12 threatened. That needs to be removed, but -- so there
13 is that status change.
14 I'm not sure if you mentioned the
15 short-eared owl, but the short-eared owl also had a
16 status change. It now is officially listed on
17 schedule 1 as special concern. I'm not sure about
18 your full list, but I didn't do a comparison of the
19 rest of all the changes to see if it affects your
20 project, but -- but it's in Canada Gazette posted July
21 7th.
22 MR. RICHARD HOOS: Gavin, good
23 morning. Rick Hoos here, from Avalon. I -- I --
24 since you mentioned you weren't sure of the full list,
25 our understanding of the full list of SARA-listed

1 species that are -- that may be present or are present
2 in -- either at Nechalacho or at the Pine Point site
3 included the olive-sided flycatcher, which we've seen
4 quite a few of, especially at Nechalacho. The common
5 nighthawk, very few seen. Rusty blackbird, very few
6 seen. Yellow rail, one (1) seen. Short-eared owl,
7 none seen. Horned grebe, one (1) seen at Nechalacho,
8 and the leopard frog.
9 THE FACILITATOR TOOGOOD: Thank you,
10 Rick. I'll go back to the floor. If there's any
11 other questions on wildlife? Not seeing any
12 indication of questions. Perhaps we could check the
13 phone line. Is anyone on? No questions?
14 MR. SHAFIC KHOURI: Shafic, ENR.
15 Could you guys just tell us, was there any discussions
16 with MACA on their usage of the landfill? Thank you.
17 MR. DAVID SWISHER: David Swisher,
18 Avalon. Could you clarify for me what landfill MACA
19 has?
20 MR. SHAFIC KHOURI: Shafic, ENR. Is
21 Avalon planning to use -- is it Hay River landfill?
22 Thank you.
23 MR. DAVID SWISHER: David Swisher,
24 Avalon. Yes, as indicated by Albert and hopefully
25 clarified, we'll -- we will be invoking disposal of a

1 combustible incineration there at -- at the hydromet
2 facility to minimize the amount of materials we would
3 have to transport into Hay River.
4 Any of the -- the minimal amounts of
5 hazardous wastes that are developed use batteries,
6 that sort of thing. We would work with the Hay River
7 disposal for disposal of those types of items.
8 The -- the goal in our -- our waste
9 management plan is to minimize the -- not only the
10 generation of wastes that cannot be readily consumed
11 or incinerated at site, but to also minimize the
12 amount of waste that we would have to transfer.
13 MR. SHAFIC KHOURI: Shafic, ENR.
14 Thank you, David. And have there been any one-on-one
15 discussions with Avalon and MACA regarding usage prior
16 to now? Thank you.
17 MR. DAVID SWISHER: David Swisher,
18 with Avalon. Not as of yet. I do have meetings
19 scheduled next month with the town and council, and
20 that will be one (1) of the topics discussed.
21 MR. SHAFIC KHOURI: Shafic, ENR.
22 Thank you very much.
23 THE FACILITATOR TOOGOOD: Thank you
24 for the questions. Just to clarify, it's Simon
25 Toogood, the Review Board, in the DAR do you have --

1 is your proposed waste disposal at the Pine Point
2 site, is that for taking waste to (MISSING AUDIO).
3 MR. DAVID SWISHER: David Swisher,
4 Avalon. I couldn't tell you exactly what's in the DAR
5 at this point. I'd have to look it up. I know as we
6 continue to develop our conceptual waste management
7 plan that we are considering some of the same methods
8 employed at Nechalacho at the hydromet plant, simply
9 because they've been very effective at the Nechalacho
10 site that we've been able to experience over the last
11 five (5) years at the exploration camp in terms of
12 sorting recyclables, in terms of incineration.
13 And the -- the now clean incineration
14 techniques that are out there, it just makes more
15 sense if we can minimize the amount of waste burden to
16 our -- our neighbouring community in Hay River.
17 THE FACILITATOR TOOGOOD: Are there
18 any further questions on wildlife? I see there's some
19 from Environment Canada.
20 MR. JAMES HODSON: Yeah, this is James
21 Hodson with Environment Canada again. Just wondering
22 about the access road from the hydromet facility to
23 the marshalling yard. Do you anticipate having to
24 upgrade that road much for operations?
25 And there's also -- you noted that

there's a small pond and wetland that occurs along that road. And do you anticipate any impacts to that area, or changes in hydrolo (MISSING AUDIO).

MR. DAVID SWISHER: David Swisher with Avalon. The road from the hydromet plant to the barging area is approximately 12 -- 12.2 kilometres. And about 8 -- just over 8 kilometres of that road is an existing haul road.

So there'll be some upgrades in terms of grading and levelling that road, but in terms of widening that road, it probably won't be necessary because it's already just over 8 metres, maybe a little bit more wide.

There's a -- there's a point then at the end of that 8 metres going towards the dock that it narrows. And that road then would be upgraded, so that we could attain two (2) way traffic. Right now it's just one (1) way traffic with turnouts out to the barging area.

In response to any impacts to water or marshes in the area, we would actually probably improve that. As part of the reclamation, back when Cominco left the area in '87 and -- and did their final reclamation in '91, they pulled out a lot of their culverts. But they -- they did not allow,

1 maybe, enough flow-through between one (1) side of the
2 road to the other.
3 When we go back in and do the upgrades,
4 we'll be actually adding culverts in there, which will
5 help that flow-through, versus water getting stagnated
6 or trapped in one (1) side or the other. So that's --
7 hopefully answers your question. Thank you.
8 MR. ALBERT BOURQUE: Albert Bourque
9 with ENR. That particular road is actually quite
10 heavily used by the public right now for accessing the
11 lake and hunting and whatnot. I would assume that it
12 would go under the authority of a lease. Will the
13 road remain accessible to the public, or is it going
14 to be gated off and access controlled?
15 MR. DAVID SWISHER: Dave Swisher with
16 Avalon. Yeah, we're -- we're aware that there's other
17 uses for that road, particularly this time of year.
18 And the intention for us is to have lease on that
19 road, but not to -- to block it off.
20 Obviously, from a safety standpoint,
21 when we utilize it during the summer months we want
22 to, for the safety of the public, make sure that it's
23 controlled. But the rest of the year, we wouldn't
24 restrict that travel along that road for access.
25 MR. ALBERT BOURQUE: Thank you.

1 THE FACILITATOR TOOGOOD: We're back
2 to wildlife. Are there any additional questions on
3 wildlife? And looks like Stephanie has some
4 questions.
5 MS. STEPHANIE POOLE: Good morning.
6 Stephanie Poole, Akaitcho IMA office. I have a few
7 questions regarding your presentation this morning.
8 First question is in regards to dust suppressant. In
9 your presentation you mentioned that you would just
10 use whatever dust suppressant is approved by the GNWT.
11 And I wonder if you have optimized your options and
12 narrowed them down and if you have any information for
13 us on what exactly you might be using as a dust
14 suppressant?
15 And in regards to wildlife in the area
16 of Thor Lake, I didn't hear in your presentation any
17 mention of musk ox. And it is my understanding, as
18 Lutsel K'e Dene that musk ox have been seen in that
19 area. In fact, this summer they've been harvested
20 near Taltheilei Narrows.
21 And so I wonder, in your presentation
22 when you showed the chart about different areas and
23 mitigations that would occur, you mentioned the
24 underground. And you said that there -- that it would
25 have no impact on wildlife and that there were no

1 mitigations required.
2 But it is my understanding at some of
3 the already existing underground mines that sometimes
4 wildlife are found underground, in particular ducks.
5 And so I'm just wondering -- I'm thinking that you
6 should think of that as well, and perhaps how to
7 mitigate that so it doesn't happen at your site as
8 well.
9 In regards to wildlife near mine sites,
10 when you talk about bears and foxes, a lot of times
11 they become what you call "nuisance animals." And the
12 general practice is to dispose of them. And I'm
13 wondering what -- what is Avalon's proposed practice
14 for dealing with nuisance wildlife on site at Thor
15 Lake and Pine Point?
16 Looking at your local study area I
17 understand that you're saying that that map that was
18 shown in the presentation was a mistake, or a old map
19 or something, or didn't really ref -- reflect the
20 local study area, which is confusing for us reviewers,
21 not helpful. But what I wonder is, and if it is in
22 the DAR, maybe you could direct me to where, do you
23 have a map that shows your proposed zone of influence
24 for the Thor Lake site, and including the Pine Point
25 site, and including a zone of influence for the

1 corridor of transportation between those -- both
2 sites? Do you (MISSING AUDIO).
3 You spoke about a draft wildlife
4 management plan that was in the DAR. And I want to
5 know if traditional knowledge was incorporated in the
6 development of that draft plan, and how?
7 There was some discussion about waste
8 and the incineration of waste. There will be some
9 waste burned on site at Thor Lake. And now you're
10 contemplating burning waste at Pine Point as well.
11 For the Akaitcho Dene First Nations, we -- we try to -
12 - we have a concern regarding incinerating waste. And
13 it is the increasing levels of mercury in our fish and
14 water.
15 And then in -- during the questioning,
16 I heard you mention that there are -- now there are
17 clean incinerator technologies. And I'm wondering
18 what are these clean incinerator technologies that
19 you're speaking of, and is that what you're proposing
20 to use on site?
21 And -- and also through questioning,
22 I'm interested in knowing how many other users of the
23 road on site are there for different seasons,
24 annually? And do you still have a winter road from
25 Yellowknife to your Thor Lake site? How many users

1 are on that road as well? Those are my questions for
2 now. Thank you.
3 THE FACILITATOR TOOGOOD: Thank you,
4 Stephanie. Avalon...?
5 MR. DAVID SWISHER: Thank you,
6 Stephanie. David Swisher with Avalon. So I'll just
7 go through and -- and answer the questions, Stephanie.
8 And please interrupt me if -- if I haven't answered
9 any one (1) of your questions.
10 On dust suppression, we use the term as
11 a, you know, as a -- as a broad general term, but at
12 the end of the day there's a lot of forms of dust
13 suppression. Magnesium chloride, that sort of thing.
14 Simply, our intention would be to use
15 water as -- as dust suppression. That's the simplest
16 form and it's also the least, I guess, harmful to the
17 environment, if you will. So that -- that's the
18 intent within the -- the DAR.
19 At the Nechalacho site, you asked about
20 musk ox. I've -- I've heard the same story from some
21 of the members in Lutsel K'e and have spoken to the --
22 the guys at camp. And we haven't seen any there, at
23 least not -- not yet. So we haven't -- haven't viewed
24 any or -- or seen any musk ox at least within the
25 project site. I'm not -- not saying that there aren't

1 any, it's just we haven't seen any there over the last
2 several seasons.
3 With regards to the wildlife and the
4 underground operations, most of the openings to the
5 underground operations we have for ventilation are
6 going to be secured, so -- so there's no access
7 possibility or potential for the wildlife to get into
8 those ar -- ventilation streams.
9 We do have the main decline that's
10 going to be accessible by vehicle. One (1) of the
11 deterrents we have going for us in the decline that
12 maybe is a bit different than other operations is that
13 we're going to have an operating conveyor exiting that
14 decline. So that also acts -- that noise, if you
15 will, maybe or just that movement acts as maybe a
16 little bit of a deterrent.
17 But it will be something we'll be
18 monitoring in the underground as well to make sure
19 that there are no wildlife entering into the
20 underground operations.
21 Bears, foxes, you mentioned the
22 "nuisance wildlife" and what would we do about the
23 nuisance wildlife. And I think we would -- we would
24 invoke the same plans that we've been doing at the
25 exploration camp now, maybe a bit more details with

1 regards to any of the infrastructure and buildings,
2 making sure there's skirtings and nothing can -- can
3 be attracted to -- to trying to nest underneath the
4 buildings.
5 The same with the -- the awnings and
6 the eaves, make sure they're enclosed. Minimize that
7 attraction. Make sure they're bear-proofed, garbage
8 containers on the surface so that the bears cannot get
9 in it, so minimizing the attraction of those, as you
10 mentioned, nu -- nuisance wildlife.
11 And so far, at the exploration camp, it
12 seems to be working quite well. And -- and we intend
13 to continue that and improve upon what's at the
14 exploration camp currently at the site.
15 You asked about maps showing proposed
16 zone of -- of influence. We have several different
17 maps for each of the sites that show that general zone
18 of influence, both for Nechalacho as well as at Pine
19 Point, and then the proposed barging routes as well.
20 And we have, I think, provided those
21 maps in some of the recent presentations on Monday to
22 the Review Board as well. And I believe we've got
23 them in the supplemental appendices of the DAR with
24 regards to the -- the zones of (MISSING AUDIO).
25 The draft -- oh, sorry. Users at Pine

1 Point with regards to how many users are at the Pine
2 Point. Right now, for the -- the barge access road
3 going out to the Pine Point area we are aware of a
4 fishing facility out there at that site. It's -- our
5 understanding is it's -- it's basically that group
6 that's fishing off of that point, not a whole lot of
7 other groups that are fishing out there.
8 I do know of a couple of our aboriginal
9 groups or -- or persons, if you will, from Deninu K'ue
10 and -- and the Fort Res Metis who frequent the area as
11 well. And so we're aware of those people on the Pine
12 Point side.
13 On the Nechalacho side, the ice road we
14 used one (1) year. We haven't used it other than just
15 pulling equipment in and out, not necessarily building
16 an ice road, but just pulling equipment in and out
17 over the -- the lake during the -- the drilling
18 programs out there, and so not certain of -- of
19 anybody or how many persons run by the site from the
20 barge facility.
21 We do sometimes get people that -- that
22 either are stranded, whether it's by boat or they get
23 caught in storms, that utilize that bay as a place of
24 shelter. We've had people that have had to stay there
25 for a few days, and we've -- we've brought them up to

1 camp and -- and fed them and let them use the
2 facilities.
3 The same thing in the wintertime. If
4 there's any -- any concerns with people travelling
5 back and forth, you know, we certainly are there from
6 an emergency standpoint to help -- help those people
7 if -- if help is required.
8 Rick I think was going to answer your
9 questions on the incineration of waste and the draft
10 wildlife plan and the TK study that went into that.
11 MR. RICHARD HOOS: Rick Hoos, Avalon.
12 Yes, as far as the incinerators go they will be state
13 of the art incinerators that are -- that are currently
14 in use at some of the other newer mines sites as well.
15 But in addition to having a state of
16 the art incinerator, it's also really important to --
17 to make sure that you only burn the right kinds of
18 materials in the incinerator, and particularly in
19 relation to a concern that Environment Canada has
20 raised about dioxins.
21 There are now guidelines out for what
22 kinds of materials should be permitted to be burned in
23 an incinerator and which ones should not be, so that's
24 very important as well. So you need to operate the
25 incinerators correctly, as well as have the right unit

1 there to begin with.
2 And with regards to TK information and
3 use, there were TK studies done with Lutsel K'e, with
4 Deninu Kue, and with the Yellowknives. And that
5 information from the TK studies was used throughout
6 preparation of the DAR and also has factored into some
7 of the considerations built into the waste management
8 plan as well.
9 I might also mention you had -- you
10 talked about musk ox, and I did look into the -- what
11 was stated in the DAR about this and I was certainly
12 aware of this as well, the musk ox, of course,
13 generally are on the barren lands, but they have been,
14 as -- as we've heard from many people at each of the
15 communities, they have been moving further south and
16 they've been around the Rocher River and Taltson area.
17 And whether they continue to move south
18 and perhaps west remains to be seen. But, of course,
19 Nechalacho is -- is within the forested area, so it's
20 less likely that they would appear there, but it's not
21 beyond possibility that they might some day show up
22 there. Thank you.
23 MS. STEPHANIE POOLE: Thank you.
24 Stephanie Poole, Akaitcho IMA. I just have a few
25 follow-up questions. For the dust suppressant you

said that you would be using water and I'm wondering what water.

Is that water from Thor Lake, then that becomes groundwater that will be captured and report to the tailings management facility? That's my guess. I was wondering.

For the musk ox I think that you have to consider them in your wildlife monitoring and management plans and I just want to make that clear. I've heard you talk about how you will manage the tailings management facility, and it sounds like you're going to have an employee go there once a day and look around.

So I want to know -- I want more information on how you will keep ducks out of the tailings management facility, both at the Thor Lake and Pine Point site and I don't want to hear that it's going to be an employee that goes over there and looks at it once a day.

For the zone of influence you're saying there's a series of maps in an appendix. What I'm requesting is one (1) map that shows the entire zone of influence proposed. That's my request.

You mentioned that traditional knowledge studies were done with the three (3)

1 Akaitcho Dene First Nations, and I wonder what type of
2 traditional knowledge studies were those. Were they
3 occupancy studies or were they specifically focussed
4 on informing the design of your proposal. And I would
5 like to know exactly how they influenced your draft
6 plans, which areas, where exactly was traditional
7 knowledge incorporated.
8 Could we get the information for review
9 on the type of incinerators that you're planning on
10 using? That's another request. And I'm interested in
11 hearing on what sort of monitoring plans will be in
12 place for your roads in the future moving forward.
13 Because right now it sounds like they're not
14 monitored, you just have who's using them and when.
15 Thank you.
16 MR. DAVID SWISHER: David Swisher with
17 Avalon. So the -- the water that we're using for the
18 -- in the facility, naturally, we're going to have
19 water at Nechalacho being pulled from Thor Lake. That
20 water would be used as dust -- dust suppression.
21 At Pine Point we'd have the natural
22 water there that we'll be pulling for the process
23 facility, and that water would be used as -- as dust
24 suppression. With regards to keeping ducks out of the
25 -- the TMF, this was actually brought up yesterday as

1 well.
2 And what we discussed was the -- there
3 are several different ways of -- of keeping birds from
4 landing in the TMF. And -- and so the -- the goal
5 there was to -- to first make sure if there was any
6 harm to any birds, if they were landing there, and to
7 make sure that that's identified and the impacts
8 associated with that, but then to -- if -- if there
9 would be that potential, then there are different
10 levels of deterrents that can be used at tailings
11 management facilities. And so we would investigate
12 those if -- if it's required.
13 Excuse me. With regards to requesting
14 one (1) map, we can take a look and see about
15 generating a -- a whole map and providing it to the
16 Review Board. Yeah, we'll see if we can do that.
17 Most of the maps we're able to provide we're able to
18 provide because we're -- we -- we do specific
19 topographic surveys and orthographic surveys within
20 each of the areas. If we try to pull the whole region
21 together we don't have all of that -- that mapping, or
22 details. We can pull stuff off of Google Earth and
23 provide a map that way. If that would suffice, we can
24 certainly pull something together that way.
25 With regards to the TK design -- or the

1 TK studies that were -- were done, those studies are -
2 - I think each of the communities have a copy of those
3 studies. We have not provided those studies to the
4 Review Board as -- as it is confidential information
5 to the communities. It is the community's property as
6 we've approached that from a -- a confidentiality
7 standpoint.
8 And you'll see if you take a look at
9 the TK study documentation that's in either one (1) of
10 those communities, the methodology that went behind
11 that. That was also approved through the Aurora
12 College.
13 But I can say that the -- the idea
14 behind that was to gather all traditional knowledge
15 from -- with the localized region of the plant --
16 plant site and -- and utilize that information with
17 regards to how we design, where we design, waters,
18 vegetation, that sort of thing. So those were -- were
19 considered in -- in the DAR. And we also have the
20 conformity table within the DAR that also outlines
21 where that was used.
22 And with regards to the type of
23 incinerator, I couldn't tell you the type of conciner
24 -- incinerator right now, because we're still a -- a
25 little ways away before we actually utilize an

1 incinerator. And technologies in incineration have
2 improved even from the last five (5) years. And so I
3 wouldn't want to commit myself to a type of
4 incinerator right now. What we can commit to is -- is
5 meeting the high standards of -- and meeting the
6 standards -- regulatory standards for incineration in
7 the NWT and -- and hopefully that is -- do it.
8 I hope that answered all your
9 questions, Stephanie. Thanks.
10 MS. STEPHANIE POOLE: Stephanie Poole,
11 Akaitcho IMA. I think you missed one (1) on how you
12 will be monitoring the roads, what is your plan for
13 that.
14 And for how traditional knowledge was
15 incorporated into your proposal. You said -- you
16 mentioned a conformity table that outlines exactly
17 where it was incorporated and where is that conformity
18 table located in the DAR?
19
20 (BRIEF PAUSE)
21
22 MS. STEPHANIE POOLE: And, Stephanie
23 Poole, for Akaitcho IMA again. Regarding the
24 information on the incinerator, it would be my request
25 that that information would be provided to us

1 reviewers before the issuance of final technical
2 reports.
3 MR. DAVID SWISHER: David Swisher with
4 Avalon. On the incinerators, I think it's -- what's -
5 - what's really important is just to make sure that it
6 meets the requirements. And there's very good
7 incineration regulations here in the GNWT that are
8 quite stringent. And I think for us it's important
9 that we meet that. Most of the incinerators I can
10 say, that we've looked at, are also qualified under
11 EPA standards, Environmental Protection Act standards,
12 as well.
13 Again, Avalon -- I think, as a
14 commitment, we already have a commitment in there. If
15 not, it can be made here that, you know, we intend to
16 -- to meet the -- the highest standards for
17 incineration air quality releases.
18 With regards to the monitoring of the
19 roads, I'm not certain which roads. Could you --
20 could you clarify which roads you're referring to?
21 MS. STEPHANIE POOLE: Stephanie Poole,
22 Akaitcho IMA office. I'm -- I'm referring to all and
23 any roads on -- within your zone of influence. Like,
24 if your proposal were to move forward in the future,
25 how will you be monitoring access of these roads?

1 They are public roads, but you may still be required
2 to monitor who is using them and how frequently. And
3 how are you going to do that?
4 And, you know, like I said before, I
5 hope it's just not the one (1) employee that goes out
6 there and takes a look once a day.
7 MR. DAVID SWISHER: Yeah, at
8 Nechalacho, certainly from an access standpoint the --
9 the majority access would be by the lake. And during
10 the barging operations, we'll have people at the lake
11 at all times during the -- the barging months to
12 monitor. We will have site security at the Nechalacho
13 site, as will we have that at the hydrometallurgical
14 plant at Pine Point.
15 And, basically, in terms of monitoring
16 the roads at Ne -- at Pine Point, excuse me, it would
17 only be the -- the security of the haulage season at
18 Pine Point site from the hydromet plant to the barging
19 area. And it's really just to make sure that people
20 who are wandering into the area understand that we're
21 hauling during the summer months there.
22 During the rest of the season we're
23 pretty well going to be at the plant site and only at
24 the plant site conducting operational activities.
25 THE FACILITATOR TOOGOOD: All right.

1 It's Simon Toogood with the Review Board. I wonder if
2 we could just go back for a moment. There was a -- it
3 sounded like a homework item regarding a map of the
4 zone of influence for the proposed project at both
5 north and south of the lake.
6 I was wondering, Stephanie, you know,
7 if we were to capture this as homework, what would be
8 the wording you'd be looking for more exactly, so
9 perhaps Shannon can capture this, of what you're
10 looking for in -- in the map?
11 MS. STEPHANIE POOLE: Stephanie Poole,
12 Akaitcho IMA. What I'm looking for in a map is one
13 (1) map that shows the entire proposed zone of
14 influence that includes the Thor Lake site, the Point
15 -- the Pine Point site and the transportation corridor
16 in-between both sites. Just one (1) map that shows
17 the entire proposed zone of influence, in order to get
18 an idea of whether or not it's adequate. Thank you.
19 THE FACILITATOR TOOGOOD: Thank you.
20 MS. STEPHANIE POOLE: And just one (1)
21 other thing. I'm still waiting for the location of
22 the traditional knowledge conformity table in the DAR.
23 MR. RICHARD HOOS: Yeah, Rick Hoos,
24 EBA Avalon. I have to kind of correct David a little,
25 because in this particular table of conformance there

1 was no -- we did not identify, nor were we requested
2 to identify, exactly where TK knowledge was used.
3 However, TK knowledge was used
4 throughout the DAR, and I suppose we could do a word
5 search of where it's all found and we can identify for
6 you each page where TK knowledge has been used, if
7 that's what you really wanted. But it's kind of going
8 (MISSING AUDIO).
9 MS. STEPHANIE POOLE: Stephanie Poole,
10 Akaitcho IMA office. I don't think I would like to
11 know where the word traditional knowledge appears
12 within your DAR. What I'm interested in knowing is
13 how traditional knowledge has informed the design of
14 your proposal in all aspects.
15 And so, if you could generate a list of
16 that, of how traditional knowledge, you know, when and
17 where it has been incorporated into your proposal,
18 that is what I would be requesting.
19 MR. RICHARD HOOS: Rick Hoos, EBA.
20 It's a very good question you're asking, Stephanie.
21 And I -- I'd like to present a couple of examples of
22 where we certainly took account of traditional
23 knowledge.
24 One (1) had to do with water levels in
25 Great Slave Lake. We had heard a lot of concern from

1 people that they were feeling that water levels in
2 Great Slave Lake were dropping significantly over the
3 years. And -- and that led us to do an investigation
4 of water levels in Great Slave Lake.
5 And we found that there have been
6 variations from time to time for various reasons. And
7 that was all discussed and presented in the -- in the
8 DAR. And that information then also informed the plan
9 for the barging and the water deficit they would need
10 to have and things of that nature.
11 There was also discussion with -- with
12 a lot of traditional knowledge on the wildlife species
13 frequenting both areas and how they might or might not
14 be affected by the tailings management areas and
15 whatnot. And so their -- their concerns were
16 certainly took -- taken into account in -- in the
17 design and in the development of the management plans
18 and whatnot that will be implemented during the
19 operations phase.
20 There are other examples, I just can't
21 think of them right now on the top of my head.
22 THE FACILITATOR TOOGOOD: Thank you.
23 I was just wondering if we could just go back and
24 capture that homework item, and then perhaps take a
25 break.

1 MR. DAVID SWISHER: David Swisher,
2 Avalon. It won't be a homework item. We can't
3 generate a map of that magnitude. That -- that may
4 take some work for us. So it will end up, at a
5 minimum, being an undertaking. And it will be a
6 global map showing the -- both sites, Nechalacho site,
7 Pine point and the barging -- proposing barging paths,
8 as Stephanie has indicated.
9 THE FACILITATOR TOOGOOD: All right.
10 Thank you. If we could just get the wording of that
11 undertaking.
12 MS. STEPHANIE POOLE: Yeah. Just --
13 Stephanie Poole, Akaitcho IMA. Just to be clear, it's
14 not a map of just the sites and the transportation
15 corridor that I'm requesting. It's -- it's a map of
16 the zone of influence that is proposed around those
17 sites and transportation corridor. And I guess after
18 the break we'll discuss my request for -- and we'll do
19 that after the break. Okay.
20 THE FACILITATOR TOOGOOD: Okay. Thank
21 you. Shannon, if we could get a reading of that.
22 MS. SHANNON HAYDEN: Okay. Shannon,
23 with the Review Board. I have:
24 "Avalon to provide a single map
25 showing the entire proposed zone of

1 influence for the Avalon project,
2 including Thor Lake, Pine Point and
3 transportation corridors."
4 THE FACILITATOR TOOGOOD: Thank you,
5 Shannon. Avalon, is that something that you can
6 produce as an undertaking?
7 MR. DAVID SWISHER: David Swisher,
8 Avalon. Yes, we'll do our best.
9
10 --- UNDERTAKING NO. 5: Avalon to provide a single
11 map showing the entire
12 proposed zone of influence
13 for the Avalon project,
14 including Thor Lake, Pine
15 Point and transportation
16 corridors
17
18 THE FACILITATOR TOOGOOD: Stephanie,
19 just a quick -- does that capture what your request
20 is? That's an affirmative from Stephanie. And on
21 that note, we'll take a fifteen (15) minute break.
22 We'll try and start up again at five (5) after 11:00.
23 Thank you very much.
24
25 --- Upon recessing

1 --- Upon resuming

2

3 THE FACILITATOR MERCREDI: Okay.

4 We'll get back underway. I appreciate everybody

5 finding their seats. I believe we had just finished

6 off on a couple of questions from Stephanie and we

7 were going to have Stephanie continue some of the

8 questions that she had.

9 THE FACILITATOR TOOGOOD: Hi,

10 Stephanie. Yeah, we're just going to follow-up on

11 your questions with respect to TK. If you could

12 perhaps restate the question and we'll get the topic

13 back on the radar here.

14 MS. STEPHANIE POOLE: Stephanie Poole,

15 Akaitcho IMA. I believe it's moved beyond a question

16 now and has become a request, a request for inform --

17 earlier when I asked a question, their consultant from

18 EBA gave a couple of examples of how traditional

19 knowledge was incorporated. And what I would suggest

20 is that they produce a document describing all of the

21 ways that traditional knowledge has been (MISSING

22 AUDIO).

23 THE FACILITATOR TOOGOOD: Thank you.

24 Avalon, would you -- Avalon, would you care to respond

25 to Stephanie's request?

1 MR. MARK WISEMAN: Mark Wiseman for
2 Avalon. Yeah, I guess we can prepare a -- a list of
3 those kinds of things. It will have to be an
4 undertaking. It's a -- a fairly large document that
5 we're going to have to review, as well as the three
6 (3) agreements.
7 We'll have to quality that -- that
8 it'll be within the limits of the confidentiality that
9 the knowledge studies have, but we should be able to
10 put some -- some good -- a good list together.
11 THE FACILITATOR MERCREDI: Paul
12 Mercredi, Review Board. Certainly if -- again, the
13 Review Board can consider that information
14 confidentially if that's what the -- the company
15 wishes and indicates in that document. So we will go
16 to Shannon for the wording on that.
17 MS. SHANNON HAYDEN: Shannon with the
18 Review Board. I have this is under -- Undertaking
19 number 6, and I believe it's the third one (1) for
20 today. I have:
21 "Avalon to identify how traditional
22 knowledge was used and incorporated
23 into the DAR and how TK was used in
24 the design of the proposed project."
25 And we can put in with -- within the

1 limits of existing confidentiality agreements if we
2 want.
3 THE FACILITATOR TOOGOOD: Stephanie,
4 does that capture your request?
5 MS. STEPHANIE POOLE: Stephanie Poole,
6 Akaitcho I (MISSING AUDIO)
7 MR. MARK WISEMAN: Mark Wiseman,
8 Avalon. That's fine with us too.
9 THE FACILITATOR TOOGOOD: Thank you
10 very much.
11
12 --- UNDERTAKING NO. 6: Avalon to identify how
13 traditional knowledge was
14 used and incorporated into
15 the DAR and how TK was
16 used in the design of the
17 proposed project within
18 the limits of existing
19 confidentiality agreements
20
21 THE FACILITATOR TOOGOOD: Before we
22 move on with Stephanie's questions, I believe Ralph
23 had a follow-up question on one (1) of Stephanie's
24 questions. Oh, nope? Oh, sorry, my mistake.
25 So we'll move on to further questions.

1 So we'll open it up to the floor. Are there any
2 further questions with respect to wildlife?
3
4 (BRIEF PAUSE)
5
6 MR. MICHAEL TOLLIS: Hi, Mike Tollis,
7 Lutsel K'e Dene First Nation. In terms of overall
8 wildlife, DFO has authority over fish, but there's a -
9 - a regulatory gap with authority over wildlife.
10 The way the other operational mines
11 address that gap is through an environmental agreement
12 and the creation of a monitoring agency. And I was
13 wondering if Avalon intends on entering into an
14 environmental agreement and therefore creating a -- an
15 oversight committee to hold them to their wildlife
16 commitments.
17 MR. RICHARD HOOS: Rick Hoos, EBA
18 Avalon. Environmental agreements have been developed
19 for the large diamond mines. I -- I guess I'll just
20 be blunt and say they have very deep pockets. These
21 are very costly organizations that are set up that run
22 for the life of the project and whatnot.
23 We have had internal discussions with
24 Avalon about this possibility. And given that no
25 other smaller, more normal mine that we know of has

1 such an agency overviewing its activities and has
2 agreements associated with it, we are not at this
3 point considering that sort of an option at this time.
4 MR. MARK WISEMAN: And, Mark Wiseman,
5 Avalon. Within our initial accommodation agreements,
6 too, there are components within those that help to
7 address those kinds of things in terms of involvement
8 in -- in monitoring of the project.
9 MR. MICHAEL TOLLIS: Mike Tollis,
10 Lutsel K'e Dene First Nation. Sorry, can you direct
11 me to where those -- where that information is?
12 MR. RICHARD HOOS: I wish I could, but
13 regrettably, those are confidential agreements between
14 the -- the parties involved. And without agreement of
15 both parties, I'm afraid I can't do that, at this
16 stage anyway.
17 MR. MICHAEL TOLLIS: Mike Tollis,
18 LKDFN. So you're -- you're saying that there's --
19 there's not any plans or anything in place for the --
20 the management, or sorry, the monitoring of your -- of
21 your monitoring plans?
22 MR. RICHARD HOOS: Rick Hoos, Avalon
23 EBA. No, there will be any number of management and
24 monitoring plans to address any and all environmental
25 issues under the general umbrella of an environmental

1 management system for the project.
2 There will be monitoring for water and
3 fish and aquatic life. There will be monitoring for
4 wildlife. There will be monitoring for numerous other
5 parameters as well, physical stability of the -- of
6 the tailings management facilities and the like.
7 And as Mark has alluded to, there are
8 arrangements through the agreements that are being
9 reached between Avalon and First Nations in the area
10 of interest that allow opportunity for First Nations
11 parties to participate in the monitoring, contribute
12 to the monitoring, affect the monitoring, and so on
13 and so forth.
14 So there will be a lot of involvement
15 of, particularly, aboriginal interests in Avalon's
16 monitoring programs. And through those involvements
17 and participation, they will be able to influence
18 change if -- if it seems warranted.
19 MR. MARK WISEMAN: And I -- I could
20 add to that that there will be a lot of public
21 dispersion of this kind of information. You may have
22 seen our sustainability report at the front of the
23 room there. It's just an example of an early stage of
24 where we will be open and transparent on all of our
25 environmental performances, both good and bad.

1 MR. MICHAEL TOLLIS: It's Mike Tollis,
2 LKDFN. I -- I appreciate that, but just based on --
3 THE FACILITATOR TOOGOOD: Excuse me,
4 just to interrupt --
5 MR. MARK WISEMAN: Mark Wiseman.
6 MR. MICHAEL TOLLIS: Sorry. Just in
7 my experience at the -- at the First Nation level, any
8 time that something is up for public dispersion it
9 might not be the best method to really determine
10 whether or not the programs are acceptable. Sometimes
11 people just don't comment, a lot -- a lot of times
12 people just don't comment or give their -- give their
13 advice to it.
14 So from the First Nation perspective,
15 we would -- like, our -- our value is -- is the
16 wildlife. And -- and you said, Rick, that, you know,
17 it -- it's costly and it's -- it's very expensive.
18 But, I mean, from -- from our point of view, it -- it
19 shouldn't come down to that. It should come down to
20 the protection of the wildlife. So I just wanted to
21 make that known to the Board. Thanks.
22 MR. RICHARD HOOS: Rick Hoos, EBA
23 Avalon. Just to add one (1) other comment. What
24 Avalon has already been doing for the last several
25 years is having a once a year gathering with all

1 interested parties to present the results of whatever
2 environmental or other studies have been done in -- in
3 the intervening period of time.
4 And it would seem very likely to me,
5 and I'm sure Avalon would have no problem with
6 continuing that practice, of -- of keeping people
7 fully informed and having opportunity for people to
8 share and understand the information as it is -- as it
9 is being collected.
10 It -- it's also going to be clear that,
11 you know, the environmental effects monitoring
12 program, the AEMP program, and other programs that
13 will be requirements of permits and licences will not
14 only require that that kind of work be done, but
15 require that that work become public through
16 distribution to those organizations and the general
17 public.
18 So there's going -- there's going to be
19 ample opportunity for everyone to understand the
20 results of -- of ongoing monitoring that will be
21 conducted and to influence the directions that those
22 monitoring programs might take as time unfolds.
23 MR. RICHARD HOOS: Yeah, we -- we --
24 an -- an internal agency would be just double-
25 accounting as well. We would be doing the same thing

1 with two (2) different groups that is already
2 negotiated under the agreement. So may I suggest that
3 you go back to your government and -- and talk to the
4 people about what's in the agreements, and maybe
5 that'll make you feel a bit better.
6 THE FACILITATOR TOOGOOD: Thank you.
7 Are there any follow-up questions? Mike...?
8 Stephanie, it looks like you may have a question?
9 MS. STEPHANIE POOLE: Stephanie Poole,
10 Akaitcho IMA office. I'm -- I'm sure most of you are
11 aware that I am employed by the NWT Treaty 8 Tribal
12 Corporation and the Akaitcho IMA implementation
13 office, while I'm also still a member of Lutsel K'e
14 Dene First Nation and am, in fact, on their council.
15 What I want to say here today is that,
16 in regards to your proposal and in follow-up to Mike
17 Tollis' questions, you made a statement that for
18 smaller, more normal mines, that these sort of
19 independent oversight agencies are -- are not
20 required.
21 And I would have to question your
22 characterization as -- of your proposal as a small,
23 normal mine, while it is the first of its kind in
24 Canada. There are many unknowns. Most of those
25 unknowns stem from lack of concrete information

1 provided by the proponent.
2 I would say that the risk is way too
3 high for there not to be an independent environmental
4 monitoring agency and an environmental agreement for
5 this proposal. In fact, I believe that there must be.
6 And I just wanted to put that on the record. Thank
7 you.
8 THE FACILITATOR MERCREDI: Thank you.
9 And you can consider that on the record, thank you,
10 for the Board's consideration. Todd, I saw you come
11 up.
12 MR. TODD SLACK: Thanks, Paul. My
13 name is Todd Slack. I'm a resource person with
14 Yellowknives Dene. The -- I just heard Mr. Hoos'
15 comment. And I think it's important to remember that
16 when you talk about the cost of an independent
17 oversight board or costs of monitoring programs, with
18 all due respect, your project is a billion dollar
19 project, is it not?
20 So when we're talking a couple hundred
21 thousand dollars to ensure that the predictions you --
22 your company has made in terms of impacts and the
23 modelling that they've done, that those predictions
24 are in fact true and that we are not going to see
25 significant impacts. To me, that seems like a small

1 tradeoff.

2 Now, moving on, you mentioned a number

3 of management plans and different types of monitoring

4 that are going to be done. The key difference between

5 wildlife and incineration and aquatics, water quality,

6 all of those things are enforceable by legislation.

7 Wildlife -- no one has authority on

8 making a company live up to the commitments that it

9 makes prior to getting its permits. We're -- up here

10 in the north, Rick, you've been around a long time,

11 you've seen companies come in, promise things,

12 disappear as soon as they get the permits. Things

13 never materialize.

14 Enforceable commitments -- just as good

15 fences make for good neighbours, enforceable

16 commitments make for good mines. They make for safe

17 mines. And they make for mines that le -- have less

18 impact on the land and the wildlife than other mines.

19 Ekati is a very well run mine. It wins

20 awards. It's not just because BHP, you know, all of a

21 sudden decided that they wanted to be a group, wa --

22 they wanted this diamond mine run in a certain way

23 that exceeds others. BHP has lots of mines. It is a

24 good mine because they have an environmental agreement

25 with enforceable conditions. And they have a strong,

1 independent, arm's length, oversight group.
2 The industry practice in the north has
3 shown great results. I -- I'm not sure why we want
4 to, you know, throw the baby out with the bathwater
5 here and take a step backwards. The question being:
6 How are -- how are these commitments that you are
7 going to make going to be enforceable when it comes
8 down to these areas in which there is not regulation?
9 MR. MARK WISEMAN: Yeah, well, we --
10 we have our own corporate commitments which have been
11 publicly stated and demonstrated, and we have a
12 legally-binding contract with -- with the Lutsel K'e
13 so far and, hopefully, we will have something with the
14 Yellowknife soon, which is again, when you have a
15 legally-binding contract you must do these things.
16 And to me that provides exactly the same thing that
17 you're looking for.
18 MS. STEPHANIE POOLE: It's Stephanie
19 Poole with the Akaitcho IMA office. I just want to
20 correct the record that Avalon does not have an
21 agreement with Lutsel K'e Dene First Nation.
22 MR. MARK WISEMAN: Yeah, my apologies.
23 It's with the Fort Res, Deninu Kue, sorry. My
24 apologies. Mark Wiseman.
25 THE FACILITATOR TOOGOOD: Were there

1 any follow-up comments to that?
2 MR. TODD SLACK: Yeah, and it's
3 important to note that these agreements are not
4 complete. Until there is es -- established
5 accommodations, everyone is hopeful that there will be
6 a mutually agreed upon resolution. But to simply rely
7 on that and to rely on the -- the public statements of
8 a company, in -- in the end that's an empty commitment
9 because your company may not be running this mine in
10 five (5) years. It could be a Chinese company, it
11 could be an American company, with different values
12 than you guys have.
13 At some point that's why these
14 enforceable commitments are -- are the issue. If it's
15 addressed in the -- and no one knows what's in Deninu
16 Kue -- well, maybe Patrick knows, but what the nature
17 of that commitment is. So ha -- what accommodation
18 can be made for the parties here at the table?
19 MR. RICHARD HOOS: Rick Hoos, Avalon
20 EBA. I've worked on a number of other large projects
21 with similar issues to these, and I think you -- you
22 may even be aware that even for this DAR, the company
23 put forward a list of commitments right within the DAR
24 itself. That list of commitments is, in fact, being
25 updated and will continue to be updated through --

1 throughout the process.
2 Boards such as MVEIRB and -- and other
3 boards that I have worked with have often taken those
4 lists of commitments when they were in their more
5 finalized form and made that part of their conditions
6 of their decision. In other words, their decisions --
7 their decision document would -- would present a list
8 of -- the -- the list of commitments and say, Okay,
9 apart from the decision we've made, we -- we have this
10 list of commitments that the company has put forward
11 and that is a condition of the decision that we have
12 made that that list of commitments continues to be
13 carried forward.
14 Again, turning to other projects that I
15 have worked with, another condition that boards have
16 commonly placed on those lists of conditions is that
17 the company was then subsequently required, on an
18 annual basis, to provide a report on how they have
19 conformed with those lists of commitments. And those
20 lists of commitments cover everything you can imagine
21 about a project including all of the environmental
22 considerations.
23 So, basically, it -- I'm aware of other
24 organizations that have been essentially required to
25 present an annual report card for some period of time,

1 not necessarily for the whole life of the project, but
2 certainly for a period of time covering the
3 construction phase and perhaps the initial years of
4 operation to make sure, in fact, that the company is -
5 - is doing the right things and -- and that the
6 environment is protected.
7 That is the way it has been done in
8 many other jurisdictions that I have worked with. I -
9 - I do agree with you that wildlife matters, in many
10 respects, are not regulated, as you say. But they are
11 the subject of many of the -- of the commitments that
12 are in the current list, and they can be quasi-
13 regulated by becoming part of the decisions that are
14 made with respect to a board, with respect to a land
15 use permit, or even, for that matter, with respect to
16 a water licence. So there are ways that those kinds
17 of conditions be -- can become quasi-regulated.
18 That's a long answer, but I hope it helps.
19 MR. MARK WISEMAN: Mark Wiseman, too,
20 if I could just add to it. The first agreement that
21 we have doesn't actually involve an ownership
22 component of Avalon such that there is a direct
23 involvement, again, legally binding, and with respect
24 to the legal contracts will survive takeover should
25 that unlikely event happen. But just because there's

1 a takeover it doesn't mean that the contract is made
2 null and void.
3 MR. TODD SLACK: Hi, I -- I'd just
4 like to follow that up with one (1) -- one (1) last
5 question. And the idea of quasi-regulation is not --
6 that's not regulation at all. You can't be half
7 pregnant.
8 Water Boards cannot regulate wildlife.
9 This is well acknowledged. There was terms and
10 conditions put in the licences for years which were
11 unenforceable by the inspectors. No one told the
12 First Nations about this. Like, for years, the
13 concerns were thought to be accommodated in -- in
14 these terms and conditions. It just wasn't the case.
15 Now move -- moving on, if the Board
16 were to make a measure that en -- enshrined these
17 commitments as part of the decision, would the company
18 object to that?
19 THE FACILITATOR MERCREDI: For the
20 record, that was Todd Slack.
21 MR. RICHARD HOOS: Rick Hoos, EBA.
22 I'm perhaps step -- overstepping my bounds a bit, but
23 given my experience with other companies that have had
24 no problem with accepting that the commitments that
25 they made become enshrined in a decision and then have

1 to be implemented and demonstrated to be implemented,
2 I don't imagine that Avalon would have any difficulty
3 with that.
4 THE FACILITATOR MERCREDI: I've --
5 part of -- David did have to step out, so if -- if any
6 party wished to clarify that with him, or with -- with
7 Mr. Wiseman now as -- as the representative for -- for
8 Avalon, they are welcome to do that.
9 Were there any follow up comments to --
10 to that subject?
11 MS. STEPHANIE POOLE: Stephanie Poole,
12 Akaitcho IMA. I -- I just wanted to say that I --
13 it's been my experience that commitments made in
14 Review Board proceedings are also not enforceable.
15 They're not enforced by the Review Board. And I don't
16 believe there's anyone here from the Mackenzie Valley
17 Land and Water Board to speak to how they would be
18 enforcing any commitments that become measures from a
19 Review Board process.
20 THE FACILITATOR MERCREDI: The Review
21 Board is interested in -- in improving in areas where
22 it may have -- it may have not done that. Bas -- can
23 you -- can you give an example? This would help the
24 Review Board try and capture -- capture in the future.
25 Is -- is there an instance? Again, this is for the

1 Board's consideration. Can you please elaborate?
2 MS. STEPHANIE POOLE: Stephanie Poole,
3 Akaitcho IMA office. Gee, just off the top of my
4 head, maybe we should start with when the practice
5 began. And I believe that was TNR Gold Corp. How
6 have those commitments that that company been made,
7 how has the Review Board followed up with them?
8 THE FACILITATOR MERCREDI: Could you
9 specify what -- which commitments, please?
10 MS. STEPHANIE POOLE: Stephanie Poole,
11 Akaitcho IMA. No, I can't, just off the top of my
12 head remember what they were. But, you know, it's my
13 understanding that once those commitments are made,
14 once the decision is issued from the Review Board,
15 it's out of their hands. Any commitments that are
16 made then move on from the Review Board. The -- the
17 Review Board doesn't go back and look after
18 commitments that are made during their processes once
19 the public registry is closed. Am I not correct in
20 that?
21 THE FACILITATOR MERCREDI: The Review
22 Board is bound to the limits of their jurisdiction.
23 If -- again, if -- if there are ways that can better
24 capture those commitments that have not been passed on
25 to the next phase or -- of regulation, or during

1 operations of the mine, again, if -- if things have
2 slipped through the cracks this is the forum to point
3 that out. And also the forum -- the forum to also
4 suggest better ways to capture it, if -- if it has not
5 been captured.
6 And, again, for the re -- please bring
7 those up if there are specifics for the record. The
8 Board will take note of -- of TNR as an example of --
9 of a file where that may have happened. Todd...?
10 MR. TODD SLACK: Hi, Todd Slack,
11 YKDFN. I can provide some examples. And we've
12 submitted this to the Review Board as part of the
13 Debogorski registry. Mr. Hoos -- Mr. Hoos was
14 involved in the early Drybones files, the 2003
15 applications.
16 From that process, there was -- and
17 you'll have to go back and look at the submission, but
18 I think there was twenty-four (24) measures made and
19 however number of suggestions.
20 Of those suggestions, not one (1) has
21 been implemented. Of the measures, I think it was 75
22 percent of them, something along those lines, but the
23 Board already has this information, it's on the
24 registry.
25 So in terms of looking for examples of

1 measures and commitment -- or measures and
2 recommendations -- or measures and suggestions, pardon
3 me, not being followed up on, there's evidence that
4 you could just copy into the registry if you want it.
5 THE FACILITATOR TOOGOOD: Very well.
6 And again, it -- the registries are separate. So
7 until it is pointed out on this registry, as you have
8 just done, the Board can now consider that. Thank
9 you.
10 Were there any further comments?
11 MR. MARK WISEMAN: Yeah, Mark Wiseman,
12 Avalon. I -- I would like to say that we would like
13 to highlight some of the things that we've done to --
14 to date that we're doing on a voluntary basis.
15 We've relabated -- rehabilitated old
16 mine waste dumps that -- at a cost to us that was done
17 on a voluntary basis. We're voluntarily doing a lot
18 of the things in terms of wildlife management that are
19 being requested of us here today.
20 We've already started a lot of these
21 envir -- environmental initiatives. We already have
22 waste management plans, we're already recycling and
23 all of these kinds of things.
24 Again, I refer to you our
25 sustainability report. I -- I'm just saying this in -

1 - in hopes that -- that it gives a bit more comfort to
2 the -- the people here and -- and for the record.
3 Thank you.
4 THE FACILITATOR TOOGOOD: Thank you.
5 Continuing on the subject of wildlife, were there any
6 further comments? Mr. Simon, I see you back there.
7 MR. PAT SIMON: (NO AUDIBLE RESPONSE).
8 THE FACILITATOR TOOGOOD: Fair enough.
9 If there are no further comments on wildlife, again,
10 we can break early to beat the lunch crowd. Unless I
11 see waving arms, that's what we'll do. Were there any
12 further comments from Avalon before -- before we --
13 MR. MARK WISEMAN: No. Mark Wiseman,
14 that's fine.
15 THE FACILITATOR TOOGOOD: Very well.
16 Again, last but not least, we'll break for lunch, and
17 I'm seeing that there's no one on the teleconference
18 line as well. So we'll take an early break for lunch,
19 reconvening at 1:00, continuing with SARA species and
20 145, accidents and malfunctions, and on with the
21 agenda. Thank you.
22
23 --- Upon recessing
24 --- Upon resuming
25

1 THE FACILITATOR MERCREDI: We should be
2 good to start. So welcome back from lunch. I hope
3 everybody filled their boots with good nutritional
4 food. Just an item for -- of housekeeping. Kelly
5 Cumming with Avalon pointed out that the first day
6 transcripts were not available. I've looked into
7 that. And our -- our transcript contractor has -- has
8 looked into that and is getting -- will -- it -- it
9 should have been available. So it should be available
10 by the end of the day, if not, we'll look into it
11 further, so.
12 With that, we left this morning talking
13 with -- on the subject of wildlife. Before we get --
14 we -- before we continue that discussion, David
15 Swisher was away for the discussion, and we were going
16 to read the undertakings that were undertaken by
17 Avanol -- Avalon in his absence just for -- for his
18 benefit and any comment that he wanted to make as VP
19 of operations for Avalon.
20 So I'll go to Shannon. And I believe
21 it's two (2) undertakings. So, Shannon.
22 MS. SHANNON HAYDEN: It's Shannon,
23 with the Review Board. So I got two (2) undertakings
24 written down while you were gone. I got Undertaking
25 number 5. It's the second one for today, was Avalon

1 to provide a single map showing the entire proposed
2 zone of influence for the Avalon project, including
3 Thor Lake, Pine Point, and the transportation
4 corridors. Okay.
5 And Undertaking number 6, it's the
6 third one for today, Avalon to identify how
7 traditional knowledge was used and incorporated into
8 the DAR and how TK was used in the design of the
9 proposed project. And in brackets I have, within the
10 limits of existing confidentiality agreements. Okay.
11 THE FACILITATOR MERCREDI: Thank you,
12 Shannon. And is there any further comment on -- on
13 those subjects before we move the discussion forward
14 with -- on the subject of wildlife? And I'm seeing,
15 No. So with that, we will open the floor up to -- for
16 the subject wildlife. And Simon will be -- continue
17 to facilitate on this subject.
18 THE FACILITATOR TOOGOOD: I'll start
19 my facilitating role then. Are there any questions
20 from the floor on the subject of wildlife? It doesn't
21 appear that there are any comments. Oh, sorry, Ralph,
22 I see you're off waving over there.
23 MR. RALPH GRISMALA: Ralph Grismala,
24 ICF Marbek. This is a followup on an issue that was
25 raised this morning by Stephanie related to dust

1 suppression. During the presentation, I believe Rick
2 Hoos said the dust suppression would be mostly water.
3 In further comments, David Swisher said he -- he
4 mentioned that there were other dust suppressants,
5 such as -- what did he say, magnesium chloride. But
6 you said that Avalon will use water, I believe was the
7 quote I had written down.
8 In the DAR, it says you would use water
9 or approved dust suppressants. And you -- you
10 referenced a particular document by the Government of
11 the Northwest Territories. And they allow calcium
12 chloride deal 10 and bunker C.
13 But it sounded like you were making a
14 commitment to use water, and only water. And I would
15 like to clarify that and get that on the record.
16 MR. DAVID SWISHER: David Swisher,
17 Avalon. Yeah, I mean, we're going to use water
18 initially. But I'm not going to operationally pi --
19 tie the operation's hands if it's deemed by regulators
20 or environmental groups later on that we should use
21 some sort of other longer lasting dust suppressant
22 that doesn't have any negative impacts on the
23 environment.
24 So I think initially our thought is
25 that we would utilize water until such time that we

1 would work with regulators and our aboriginal partners
2 in determining if there's a better -- a better option.
3 THE FACILITATOR TOOGOOD: This is an
4 air quality issue as well. Air quality is a -- you
5 know, on the subject that -- this will be a subject
6 that would be discussed tomorrow as well. It is an
7 agenda topic for tomorrow. I think it is -- that
8 discussion, I think, will definitely further inform
9 that -- or the -- that discussion -- there will be
10 some more context on that -- on that subject, I think.
11 So at this point, I think we can -- it's safe to leave
12 it for air quality tomorrow.
13 And then that can inform any -- any
14 further questions there might on that. So I -- I
15 think it's safe to -- to park that for now. And then
16 we can revisit that as needed.
17 So with that, any wild -- any more
18 wildlife questions?
19 I'd -- if not, we would -- we will move
20 to the next agenda item. If there were any more
21 questions on wildlife, now would be the time to speak
22 up.
23 I'll go to the teleconference line, and
24 I'm -- the sound technician is indicating no. So with
25 that, we'll move to the next agenda item, unless I'm

1 seeing -- I'm not seeing any waving arms.
2 So we'll move -- move to the next
3 agenda item which is accidents and malfunctions. So -
4 - and I will open the floor up for questions for -- on
5 that subject. And I believe actually Avalon has a
6 presentation on that.
7
8 ACCIDENTS & MALFUNCTIONS:
9 PRESENTATION BY AVALON:
10 MR. DAVID SWISHER: David Swisher,
11 Avalon. We just have a -- a refresher slide. David
12 Swisher with Avalon. This is going to be very quick,
13 as it's just one (1) slide really, just as a refresher
14 from what was obtained in the DAR.
15 With regards to accidents and
16 malfunctions, we're going to be talking a bit more
17 about the tailings dam, I think is the next agenda
18 item. And so Kevin Hawton with Knight Piesold will
19 take us through that portion of the -- the
20 presentation when we get to that next phase.
21 But just as a reminder and -- and also
22 discussed yesterday, a tailings dam will be -- or
23 follow the Canadian Dam Association safety guidelines.
24 That's how it's been designed, as well as the MAC, or
25 Mining Association of Canada, guide for management of

1 tailings facilities.
2 Also in the DAR was regarding barging
3 on the Great Slave Lake, and there were a couple sub
4 topics within the DAR that discussed the potential for
5 barging concerns on the Great Slave Lake that we heard
6 from many groups, including our Aboriginal partners.
7 Those included potential barge sinking
8 causing containers to spill in the Great Slave Lake.
9 We've done research on that, which was included in the
10 DAR based on the local NTCL company that's operated in
11 the Great Slave Lake, or in the north region, for many
12 years and identified that they'd had no sinking
13 incidents in the seventy-five (75) years -- or the
14 last seventy-five (75) years that they've been
15 operating within the GSL.
16 It's also -- barging is also a very
17 proven and safe operation when you look at it compared
18 to other forms of transportation, particularly, say,
19 ice road transportation. So notwithstanding that,
20 that also then led to another concern which was if --
21 if in the remote chance that there is a sinking of a
22 barge, what happens to the lake, what are the effects
23 of the concentrate in the Great Slave Lake.
24 And so although it's unlikely that this
25 would happen, we still have to plan for that. And we

1 will -- of course, Avalon's not in the business of
2 barging, and so we intend to have a -- a barge company
3 that we'll be hiring to do the barging for us, so
4 that'll be outsourced work, hopefully by a local
5 company and hopefully by a company that's partnered
6 with one (1) of our Aboriginal groups.
7 That barge company then would be
8 responsible for the safe transport of our concentrate
9 across the lake to and from both sites. But looking
10 into the information more so, with regards to the
11 concentrate and the effects that it may have on the
12 Great Slave Lake, if, say there was a container that
13 spilled into the Great Slave Lake, the test work that
14 we have done has identified that the concentrate is
15 inert. We know it's non-acid generating.
16 It's also non-reactive, and it's also
17 insoluble. So as we explained in the DAR in a bit
18 more detail what would happen if, say, we couldn't
19 recover all of it or we couldn't -- we couldn't have
20 the barge company recover all of it, the materials
21 would be basically an inert substance then that would
22 settle to the bottom of the lake.
23 Again, this is an unlikely scenario
24 that would happen based on the safe transport methods
25 that we've seen over many -- multiple decades with the

1 barging transportation.
2 And then the other concern that came up
3 in the barging was potential fuel spillage from
4 barging. We know that fuel is transported currently
5 through the waters -- fresh waters through the
6 Mackenzie Valley, Mackenzie Delta, as well as on the
7 Great Slave Lake. And working with our -- our -- or
8 in discussions with several different barging
9 contractors that we've been in discussions with, the
10 barges are designed with isolated compartments, and
11 they're also designed to not be loaded to full
12 capacity that allows, you know, specific compartments
13 or to transfer between compartments.
14 They're also contained within the barge
15 in the hull of the barge, and they have to be
16 inspected and certified on an annual basis.
17 So based on the procedures the barge
18 companies have provided us, we have a lot more comfort
19 in the fact that the -- that there would be no
20 spillage or -- or very little, if any, spillage
21 emanating from any of the refuelling barges that occur
22 during the summer months.
23 That's basically a recap of what we had
24 in the DAR. Thank you.
25

1 QUESTION PERIOD:

2 THE FACILITATOR TOOGOOD: Thank you

3 very much. Perhaps we could get the lights turned

4 back on and we could move to questions from the floor.

5 MR. PATRICK SIMON: Good afternoon.

6 Patrick Simon, Deninu K'ue. I guess, for me, I'm kind

7 of considering the road system because you will be

8 trucking some material from Pine Point to Hay River.

9 I'm not sure what you're going to do

10 about that. You don't plan to have accidents. I'm

11 pretty sure that we never plan for accidents or

12 malfunctions, but I'd like to know more about that.

13 I guess, for me, with the -- with the

14 barging, we -- our people have great concern about

15 barging. I think the last company that came and

16 proposed something like that, we absolutely did not

17 entertain that idea.

18 And they too said that their material

19 was insoluble and that it will just fall like a rock

20 in the -- in the bottom of the lake.

21 Subsequently, we did some intensive

22 research on the matter, and there is -- there was

23 chances and potentials of solubility within their

24 material. But I ain't talking about Rare Earth or the

25 material you're talking about.

1 I want to know if -- if you know for
2 certain that is so; that 100 percent it's insoluble,
3 and -- and -- and, if not, well, I want a breakdown of
4 -- of the -- the other aspects of that.
5 I know that for us, tailing ponds --
6 you know, for us it's a -- it's a thing that's been
7 sticking to us for generations now because of the
8 legacy of Pine Point. And so when it comes to you
9 being able to -- to address any type of malfunction or
10 to accidents within that, we would be very interested
11 in -- in knowing.
12 And I think for us, we really want to
13 be assured that all of the precautions, first and
14 foremost, is -- are taken, but if not, there's --
15 there's plans and contingency plans specifically when
16 it comes to the barging.
17 As you know, Deninu K'ue considers
18 themselves water people, so water is our number 1
19 priority. And we want to ensure that -- that you'd be
20 able to handle that matter.
21 I -- I'm not sure if people normally
22 barge in that manner. I'm not sure of the local
23 barging companies or governments ever cross lakes like
24 that in that manner. I -- I doubt it. They mainly
25 hang around. They don't cross the main lakes, and

1 they might have before when -- when they were hauling
2 off our people to residential schools.
3 But we'd like to know more about that
4 aspect just because these people say they never had an
5 accident or whatever, it doesn't mean much to us. We
6 want to hear from the people actually who, you know,
7 know about barging and stuff on these big great lakes
8 that completely go across.
9 And we know it's a big lake. It's a
10 big deep lake, and we know given climate change and
11 given the different -- different aspects of -- of
12 weather patterns changing now, it's kind of -- would
13 make it harder for anybody to really get a handle on
14 these things.
15 So -- so it's paramount that when we
16 look at the -- this particular topic that we keep that
17 in mind. We -- we can have all the plans and
18 modelling we want in terms of just figuring out the
19 conditions of that lake and the ability of us to move
20 our material back and forth on a daily, yearly, you
21 know, decadely (sic) basis.
22 But given -- given this -- this
23 changing world, you know, those -- those things are
24 going to change too. And -- and we want to ensure
25 that -- that, you know, there -- there is -- there

1 will be some uncertainties, and there will be some --
2 some stuff we just have to try. And subsequent, there
3 has to be these types of things that -- that are tied
4 in with it, even more so.
5 For me, I think that the whole
6 transportation, the whole -- if you -- if you pick the
7 stuff up and you move it, then this stuff should have
8 all kinds of plans and contingency plans and what --
9 what we do if certain things occur. And I'm not sure
10 if I'm making myself clear, but I -- I eventually
11 will. I'll stop with that for now.
12 MR. DAVID SWISHER: David Swisher,
13 Avalon. Thanks, Patrick. I -- I think it was very
14 clear what you were indicating there. I'll -- I'll
15 just go through and answer a couple of your questions
16 for you, maybe the latest one (1) being that we agree
17 with regards to the contingency plans and -- and
18 having those backups, particularly around the barging.
19 We understand that that is of -- of
20 importance and concern with -- with regards to
21 transporting across the Great Slave Lake. And so it
22 is important to us, and we will make sure that
23 whomever the barge company is that transports that
24 material for us not only meets Avalon standards, but
25 has their own standards and contingencies as well.

1 In fact, when we did develop the DAR,
2 we did put, just as a precursor, we put in
3 contingencies that at least we were aware of from some
4 of the research we had done. And so I think, you
5 know, that's a good basis for any barge company that
6 does do the -- the transporting for us, to sit down
7 with them and make sure that they are -- are
8 supportive and have their own plans in place to make
9 sure that the barging is not only safe, but that we
10 are -- are diligent in how we're transporting the
11 products both to and from the site. So thank you for
12 that.
13 The trucking is another good one (1).
14 You're right, we didn't cover all of that. But the
15 trucking is from Pine Point to -- to the Hay River
16 railhead. It's -- it's one (1) of those -- excuse me,
17 it's one (1) of those items that we will be trucking.
18 It's important for us to keep in mind a -- the -- the
19 number of trucks.
20 And I think when we first started this
21 exercise, trucking was a concern. And also in one (1)
22 of my prior projects, trucking was a concern in terms
23 of the number of truck trips and that sort of thing.
24 And keeping that in mind and also
25 hearing from the communities on the south side of the

1 lake. And those concerns, you know, we -- we were
2 able to reduce a lot of the trucking requirements
3 within this project in how we designed it and make
4 some further optimizations as we go with regards to
5 minimizing that amount of truck traffic.
6 For instance, we originally thought
7 about having the consumables that were required for
8 resupply annually to the mine, the reagents for
9 resupply annually to the mine, Nechalacho site, going
10 through the -- the Pine Point site, hydromet site.
11 And being loaded there as a back haul from the
12 concentrates coming across.
13 We've eliminated that trucking portion
14 of it so that it basically is -- is barged right out
15 of -- of Hay River. So we don't have to increase that
16 truck traffic. So that was -- that was something that
17 was a direct result from some of the concerns from the
18 communities that we've heard, and -- and that I'm
19 also aware of through past projects.
20 We will have contingency plans in the
21 event of accidents. We -- we both know that there are
22 accidents that occur just naturally right now on that
23 roadway, especially in the wintertime.
24 So it'll be important for us to make
25 sure whoever does the trucking for us, contracts for

1 us, that not only do they meet our standards, but they
2 also meet the transportation standards, they meet the
3 posted speed -- speed limits and that -- and that
4 their operators are certified to ensure that -- or to
5 minimize to the greatest extent possible any incidents
6 from occurring.
7 But if those incidents occur, then, you
8 know, we are there to help support and make sure it's
9 implemented in our own spills contingency plan to --
10 to take care of that material and pick it up and --
11 and clean it up and -- and dispose of it properly.
12 So (MISSING AUDIO) concern. We agree
13 with you there. With regards to the concentrate, and
14 certainly can understand what you've heard in the past
15 with regards to concentrate being soluble in the lake.
16 I can only speak for the work that Avalon has done
17 with regards to that work.
18 And we've done extensive work through
19 SGS Lakefield on the test work for that concentrate
20 and, you know, can confirm that it is insoluble. So
21 we feel very comfortable with that concentrate and the
22 transportation of such across the lake.
23 And the tailings pond, I think that's a
24 very good question. I -- I just wonder if we should
25 hold off on answering that one (1) for you because

1 Kevin Hawton here, after this discussion, he'll go
2 through the tailings management facility and a lot
3 more of the design criteria that went into it that
4 will hopefully answer your question at that time.
5 MR. PATRICK SIMON: Patrick Simon,
6 Deninu K'ue. Yeah, in -- in that sense, I think I was
7 wanting -- I was talking about with the tailings is if
8 there's a bailing or a breakdown in the tailings, like
9 what's your -- your plans in that.
10 I think for us also, we wanted to
11 really remind the Board that this road system out of
12 Deninu K'ue, and even though it seems like we're not
13 isolated, at certain times, if -- if conditions, if
14 things occur, we -- we can be if we have companies
15 working on our roads, moving material like this.
16 And I think there's two (2) that have
17 plans. I'm not sure that will occur. And if the --
18 the times and conditions of weather and stuff, you
19 know, potentially we -- we can be stuck in Res. with
20 no road out and no -- wi -- with no flight out because
21 of weather or whatnot.
22 And the more we begin to -- you know,
23 it's fine if we have a mine way out in the tundra.
24 But now we're getting closer to the communities where
25 they're starting to use our road system and our -- our

1 -- you know, our municipal dump systems and stuff like
2 that, that these things have to be considered, that in
3 certain conditions of certain things happening.
4 And people have to be ever mindful that
5 that's communities' lifelines. And in this case,
6 potentially it could potentially be a community
7 lifeline. If they had a big accident where they
8 blocked that road and they just absolutely had it
9 blocked for a while, you know, what does that mean,
10 and -- and plans and contingen -- contingencies or --
11 or even discussions take place in -- in that -- in
12 that respect.
13 I know I love Res. But I don't always
14 want to be stuck in Res. You know, I'd like to have
15 the freedom to come and go. And I'll just leave it at
16 that for now. Mahsi cho.
17 THE FACILITATOR TOOGOOD: Thank you
18 very much. Avalon, did you care to respond to any of
19 those questions or concerns?
20 MR. DAVID SWISHER: Yeah, no. Dave
21 Swisher, Avalon. Thanks, Patrick, for the -- the
22 information and the -- and the feedback.
23 THE FACILITATOR TOOGOOD: Thank you
24 very much. Any other questions from the floor?
25 MS. SHANNON GAULT: Shannon from the

1 YKDFN. I'd like the record to reflect that the YKDFN
2 has particular interest in the barging activities
3 associated with this project, especially on the north
4 side of Great Slave Lake where the barging will
5 interfere with traditional fishing routes towards the
6 east arm, between Yellowknife, where members of the
7 YKDFN community actively exercise their traditional
8 practices and, you know, the potential conflict of
9 just simply increased numbers of watercrafts in that
10 area and that people will encounter on a daily basis
11 throughout the life of the mine.
12 I have a question regarding traditional
13 knowledge. I believe we saw on the first day of this
14 technical session that the -- from what was presented
15 originally in the DAR, and I'd like to know if -- I
16 understand that traditional knowledge informed all
17 aspects of the DAR in this project development and
18 proposal.
19 But specifically, I'd like reassurance
20 that traditional knowledge was used to inform what
21 routes were selected by the proponent. And I'd also
22 like to know if the -- if Avalon will assume
23 responsibility for conveying that traditional
24 knowledge to any barging company that will be
25 contracted for the barging work.

1 I'd like reassurance that the ones
2 actually driving the boats and driving the materials
3 across the lake will -- that there will be a completed
4 circle when it comes to traditional knowledge and
5 what's available. Thanks.
6 THE FACILITATOR TOOGOOD: Respond?
7 MR. DAVID SWISHER: Dave Swisher, with
8 Avalon. Thanks for that, Shannon. Just to go back,
9 certainly we respect the concerns that the
10 Yellowknives have with the -- the barging activities,
11 and we -- you know, I think we -- we -- we share the
12 same concerns.
13 We're fortunate that it's a limited
14 period of time throughout the year, but it's also the
15 active period of time that everybody's using the lake,
16 so we recognize that. And -- and we look forward to
17 working with Yellowknives in -- in making sure that,
18 you know, communications are -- are there and that if
19 there's any other future suggestions, then, you know,
20 we'd certainly be more than open to -- to hear those,
21 whether it's from our Yellowknives partners or Lutsel
22 K'e or Deninu Kue as well.
23 To answer your question on the barge
24 routes, absolutely, traditional knowledge was used
25 with regards to some of the barge routes. It was a

1 combination of traditional knowledge, but I would have
2 to say some of Avalon's ignorance with regards to
3 barge routes as well as some of the barging companies
4 that we're working with currently.
5 I'll first start off with our own
6 ignorance, because when we first look at the barge
7 routes, we just -- I -- idly thought that the barge
8 route would go from point A to point B across the
9 lake.
10 And -- and, so, through feedback from
11 Deninu Kue First Nation, you know, there were concerns
12 about the barge route passing -- excuse me -- passing
13 in front of the Resolute Bay there: being visible, any
14 noise, that sort of thing.
15 And -- and so we looked at that and
16 then also looked at or heard through a lot of
17 discussions with the Yellowknives groups as well who
18 use that for transport, as well as Lutsel K'e who use
19 that area for transport, it became very clear that
20 there are certain areas that are, I guess, more
21 conducive to weather effects than others. And so --
22 particularly along the -- the north shore there, so --
23 in -- in the Simpson Islands areas.
24 So understanding that a bit more, then
25 it got us to thinking, Well, you know, we're not

1 barging experts, nor are we route experts. So we went
2 to the experts who have that expertise in barging, and
3 that's when they came back to us and said, These are
4 the ideal routes, because we expressed to them those
5 concerns we had heard from the communities.
6 And they indicated that, Here's the
7 ideal routes that you have. There's really two (2)
8 routes. They don't vary that much, but it also
9 addresses the concerns from the Deninu Kue First
10 Nation with regards to passing close to Resolute Bay,
11 because it's further out in the lake.
12 But it also addresses some of the
13 feedback we received from Yellowknives and Lutsel K'e
14 with regards to the ideal locations and routes, in
15 terms of transferring closer to the north shore before
16 crossing the lake. It gets you out of that deeper
17 water channel.
18 So, you know, we also were able to get
19 an education through the process in communications
20 with our Aboriginal partners, so I thought that was
21 very useful for us.
22 And, so, hopefully, to answer to your
23 question, is, yes, we did utilize that. We -- we were
24 able to take that information in and it wa -- it was
25 utilized and helped us to then seek the appropriate

1 technical experts to also confirm what we were hearing
2 from our Aboriginal partners.
3 And I think with that too -- you had
4 asked about the traditional knowledge, and I think
5 that, hopefully, I answered that as well, in terms of
6 we're -- we're using that information currently with
7 regards to the -- the bid proposals that we have out
8 there with different barge companies and -- and
9 letting them know that it's actually our expectation
10 with those barge companies -- we've -- we've -- we're
11 in discussion with four (4) of them -- that we expect
12 them to actually, once we narrow it down and determine
13 who that barge company is going to be, then we expect
14 them to actually sit down with us and our Aboriginal
15 partners so that we can discuss and get feedback in
16 that regard.
17 So that is an expectation that Avalon
18 has put onto the contractor, so that we can get direct
19 interaction with our Aboriginal partners. Thank you.
20 MS. SHANNON GAULT: Thank you. It's
21 Shannon from the YKDFN. Thanks for that answer. You
22 did address my questions.
23 I guess I'd just take it one (1) step
24 further and ask if the last part you mentioned, about
25 bringing the First Nations and the developer and the

1 barging company together, will that be the form of,
2 like community consultation type of meeting, or -- or
3 what do you see that the outlet would be for that
4 conversation to take place?
5 MR. DAVID SWISHER: David Swisher,
6 with Avalon. We never consult; we like to engage. So
7 it's all part of our engagement plans with any of the
8 major contractors and the commitments we've made
9 within the agreements we are working on with our
10 Aboriginal partners. Unfortunately, those are
11 confidential, and -- and if you want more information,
12 I'd ask you to go back to chief and council to find
13 more of that information. Thanks.
14 THE FACILITATOR TOOGOOD: Thank you
15 very much. Shannon, do you have any follow-up
16 questions? No? Any other questions? Laura?
17 MS. LAURA JONES: Hi, it's Laura here,
18 from Transport Canada. David, we talked a bit about
19 this and that you're having contractors handle your
20 barging operations.
21 But Transport Canada would like to know
22 if oil pollution prevention plans and oil pollution
23 emergency response plans for the proposed oil handling
24 facilities at Great Slave Lake have been developed.
25 MR. DAVID SWISHER: David Swisher,

1 with Avalon. Not by Avalon, but the barge companies
2 that we're in discussions with have those procedures
3 in place.
4 MS. LAURA JONES: Okay, well, I guess
5 I could give a bit more background on it. But,
6 basically, Transport Canada has to review all of those
7 plans for compliance and approve them. So I'd like to
8 know if Avalon will commit to forwarding copies of the
9 plans to Transport Canada as soon as they are
10 available?
11 I know that if you don't have your
12 contractor yet, you most likely don't have the plans
13 yet. But we will need to see them.
14 MR. DAVID SWISHER: David Swisher,
15 with Avalon. That's not a problem. As soon as we
16 have chosen the barging contractor, then we will
17 forward whatever you require. I would just request
18 that we receive -- I receive a list directly from you,
19 in terms of what you are looking for, so then we can
20 make sure that -- that we get you the proper
21 information.
22 MS. LAURA JONES: Laura Jones, of
23 Transport. For sure. And on to my next question
24 about vessels, which might be a question that you can
25 answer later as well.

1 But Transport Canada requests to know
2 what types of vessels or barges you'll be using to
3 offload dry containerized car -- cargo, petroleum
4 products, and any chemicals considered to be dangerous
5 goods under the Transportation of Dangerous Goods
6 Regulations.
7 Transport Canada also requests to know
8 how vessels transporting dangerous goods will comply
9 with the Transportation of Dangerous Goods
10 Regulations.
11 MR. DAVID SWISHER: David Swisher,
12 with Avalon. Yeah, as soon as -- again, this goes to
13 once we determine who the barging group is going --
14 going to be, then we'll be able to forward the
15 information directly to you.
16 MS. LAURA JONES: Laura, from
17 Transport. Okay, that sounds good. And that should
18 be, probably, information that gets posted on the
19 registry as well.
20 MR. DAVID SWISHER: David Swisher,
21 with Avalon. That information has already been posted
22 on the registry. It's within -- it's contained within
23 the DAR, with regards to the types of barges that
24 conceptually would be used, which, at this point,
25 would -- is still valid. So that information is

1 posted on the registry. What we would provide is
2 details, in terms of numbers, and that sort of thing,
3 once we determine who the barge contractor will be.
4 MS. LAURA JONES: Laura, from
5 Transport. But also outlining -- describing how you
6 will comply with the requirements of the
7 Transportation of Dangerous Good Regulations?
8 MR. DAVID SWISHER: David Swisher,
9 with Avalon. Again, that -- that is deferred to the
10 barging contractor. We war -- we are not in the
11 barging business. And we will require the barging cra
12 -- contractor to meet Transport Canada guidelines.
13 MS. LAURA JONES: Laura, from
14 Transport. I understand that, certainly. But since
15 barging is a huge portion of the project as proposed
16 and is obviously a concern to a lot of people, it
17 seems like your plans on how to avoid accidents and
18 malfunctions related to dangerous goods should be
19 considered in the assessment.
20 MR. DAVID SWISHER: Now, again, in the
21 -- in the DAR -- David Swisher, with Avalon -- we
22 provided our spills contingency plans to the point in
23 which we can take care of it. Operationally, we're
24 not going to have people running out there into the
25 lake, because that would create more problems because

1 we're not marine experts.
2 NTCL also provided their spills
3 contingency plan for the DAR. It's in the appendice -
4 - Appendix A of the DAR. Sorry?
5 UNIDENTIFIED SPEAKER: Appendix L.
6 MR. DAVID SWISHER: Sorry, Appendix L
7 of the DAR. And again, we will be requiring that any
8 barge contractor that provides a service for Avalon
9 meet all the requirements for Transport Canada. We
10 will readily admit that we're not marine experts.
11 Thank you.
12 MS. LAURA JONES: Laura, from
13 Transport. Sorry, whose spill contingency plan did
14 you say in Appendix L?
15 MR. DAVID SWISHER: Dave Swisher,
16 Avalon. That is NTCL's plan. We were able to obtain
17 some of those initially early on to include in the DAR
18 through NTCL. But again, we haven't finalized who the
19 barging contractor will be, but we -- we will
20 certainly provide whatever other information you need
21 from them once we finalize that -- that decision.
22 THE FACILITATOR MERCREDI: Actually,
23 Laura, this question might move this line of
24 questioning forward. Does Avalon have an idea of when
25 they would be finalizing that contract? Is there --

1 would it be within -- I -- I guess I'll just -- yeah,
2 does Avalon have an idea?
3 MR. DAVID SWISHER: Davis Swisher,
4 with Avalon. Because we don't need to transport the
5 concentrates until we're actually ready to transport
6 concentrates, and right now that looks like that would
7 be in the summer of 2016, the -- the decision, in
8 terms of who we go with, may not fall within this
9 regulatory process, which is why I would, you know,
10 defer to what we provided already.
11 However, you know, we can -- and we
12 have no problem committing to meeting and working with
13 Transport Canada to make sure that they receive the
14 information that they require. And -- and we can work
15 with either of the barge companies if we don't make
16 that determination right now.
17 Again, it's hard for a company such as
18 Avalon, who is not cash flowing from other operations,
19 to commit to a multimillion dollar contract this early
20 in the stage. But we -- we would have a very good
21 idea soon, but we could not commit to that.
22 But as indicted to Transport Canada in
23 sidebar discussions, we're committed to providing
24 whatever they -- they need. And I can make that
25 commitment right now, that we will provide whatever

1 Transport Canada needs. And -- and if it means we
2 work with multiple barge groups that we're working
3 with to provide that information, then we'll do so.
4 THE FACILITATOR MERCREDI: And on that
5 -- on that subject, the Board has heard evidence fro -
6 - during scoping and during -- during this session and
7 throughout the information request rounds, and the bo
8 -- and there mi -- may be continued instances where
9 the public has shown their concern over the barging.
10 And -- and I know that that evidence is on the
11 registry.
12 So does -- does Transport Canada have
13 additional information along -- along those lines?
14 What I'm saying is that there -- there -- it is
15 definitely the subject of barging across Great Slave
16 Lake, con -- barging concentrate, and -- and other
17 substances. The Board is definitely aware of -- of
18 there being public concern on that.
19 So I -- it's -- it comes to: How --
20 how can the Board the consider that evidence? That's
21 -- what evidence would -- would come in addition to
22 that, I guess, from -- from Transport Canada?
23 That -- that's what, I guess, how it
24 can be appropriately framed here today. And just
25 again, keeping in mind that this is a collection of

1 evidence for the Board. So I'm...Laura?
2 MS. LAURA JONES: Laura, from
3 Transport Canada. Yeah, it's a bit of a balancing
4 act, because as you say, the project is in the
5 planning stages, so you don't have all those finalized
6 details about your contractors and specifics on what
7 you'll be shipping and what quantities, when, and
8 where.
9 MR. DAVID SWISHER: Excuse me. David
10 Swisher, from Avalon. That wasn't the question
11 before. I mean, we have the quantities shipping from
12 and where to. Those types of details, we have.
13 I think you were asking before about
14 specific details on contractor or their plans
15 specifically, in terms of operating plans. And again,
16 Avalon's committed to working with Transport Canada to
17 provide whatever they need. But if you're talking
18 about operational items, then we'd certainly be happy
19 to -- to answer those questions now, if you have
20 operational questions. Thank you.
21 MS. LAURA JONES: Laura, from
22 Transport Canada. Okay. Well, I guess in talking
23 about the last question on fuel and oil pollution
24 prevention plans and also oil pollution emergency
25 response plans, that's something that -- I mean, in

1 the last fifteen (15), twenty (20) minutes we've --
2 it's come up from a couple people that they're
3 concerned with barging. And Patrick mentioned
4 contingency plans and what happens if there are
5 accidents.
6 I'm not sure when you'd be able to
7 provide those plans to Transport Canada, but it seems
8 like there are concerns from the public associated
9 with contingency plans, so it's valid to have them
10 evaluated at this forum.
11 MR. DAVID SWISHER: David Swisher,
12 with Avalon. Again, I would just refer you, Laura, to
13 what's been provided in the DAR back in May of 2011
14 with regards to Avalon's spill contingency plan on the
15 shores, with regards to on the land, and also the --
16 the shipboard oil pollution emergency plan that NTCL
17 provided for us as a potential barge supplier that's
18 in Appendix L of the -- of the DAR.
19 Again, I can commit right now, as
20 Avalon, that we will make sure that we meet the
21 required guidelines that are necessary, and we'd be
22 more than interested to -- to work with Transport
23 Canada to make sure that those regulations are met.
24 Thank you.
25 THE FACILITATOR MERCREDI: And as -- I

1 know that there are some plans that were submitted as
2 part of the DAR, some that were submitted in response
3 to Information Requests. So if -- if some of those
4 plans have -- if -- whether the public is in agreement
5 with those plans as being adequate at this point or if
6 they're in disagreement, this is the place to -- to
7 indicate if there is disagreement with that, and the
8 Board takes that on consideration.
9 No -- again, the process is not -- is
10 not over. We're in a technical session. There is
11 also the hearing. And so there -- there are multiple
12 steps between now and -- and the end.
13 So if -- again, this is a -- a forum to
14 bring up those viewpoints. So if -- if those plans
15 that -- or -- or lack thereof are inadequate, then I -
16 - I -- that has been brought up today, if -- if that
17 is the -- the position of Transport Canada, so -- and
18 -- and/or the public. Again, it -- it can either be
19 in agreement with the developer or in disagreement,
20 but it can be considered on the record.
21 But I -- I -- I'm -- I am trying to --
22 what's important is for the Board to understand
23 exactly what might be deficient or what might be
24 adequate. Again, if -- in either case, that -- that
25 is for the public to indicate. And again, for

1 consideration towards the end of the -- the end of the
2 environmental assessment process. I'm -- is -- is
3 there any -- anything further? Please.
4 MS. LAURA JONES: It's Laura, from
5 Transport Canada. I guess since we haven't received
6 official oil pollution prevention plans or oil
7 pollution emergency response plans from Avalon to
8 date, we can -- I can have marine safety experts
9 evaluate Appendix L and, in further detail, the spill
10 contingency plans and look for that type of deficiency
11 that you mentioned, in the meantime, before we receive
12 the official plans for approval. Is that what you'd
13 like?
14 THE FACILITATOR TOOGOOD: Simon
15 Toogood with the Review Board. A follow-up, I guess,
16 question for Transport Canada would be: You mentioned
17 that you do approve these plans. So I take it that
18 prior to operations commencing, that you would have
19 received these plans for your approval and that your
20 approval process would ensure that, essentially, there
21 are adequate protection mechanisms in place. And if
22 there wasn't, I presume that you would notify the
23 Proponent that there would have to be changes or that
24 they just couldn't do what they proposed.
25 So, I guess, with respect to the Review

1 Board, I mean, is Transport Canada confident in their
2 process by which they would review those plans and put
3 them in place?
4 MS. LAURA JONES: Laura, from
5 Transport. Yes, certainly. But since there were
6 several concerns brought up concerning barging, it
7 seemed like a good chance to, since this information
8 will be forthcoming before the approval process, to
9 have it out there for the public and concerned members
10 of Aboriginal groups to review.
11 MR. DAVID SWISHER: David Swisher,
12 with Avalon. I just remind, Laura, that for the
13 record, one (1), Avalon was not asked for these plans
14 by Transport Canada to date. And those plans have
15 been contained within the DAR for -- since the DAR was
16 submitted back in May of 2011.
17 Again, I can't stress the fact that
18 we're committed to working with Transport Canada. And
19 Transport Canada will ultimately be the ones approving
20 of these plans through our barging contractor and/or
21 our methods. And I would think that we would want to
22 work together on that.
23 The plans have been submitted, so I
24 think it would be incumbent on Transport Canada to
25 take a look at those plans that have been out in the

1 public record for well over a year and get back to
2 Avalon on any recommendations that we can feed back to
3 our barging -- or, potential barging contractors, and
4 for us as well.
5 Again, solidifying these in a final
6 form at this stage seems premature, considering we
7 won't be invoking the transport of concentrate until
8 the summer of 2016. Thank you.
9 THE FACILITATOR MERCREDI: I will say
10 that in past environmental assessments, frame --
11 framework monitoring plans have been considered by the
12 Review Board within the environmental assessment. And
13 so, again, I -- I'm just trying to grasp exactly what
14 might be of concern if there was -- if -- I -- I know
15 that there's a plan here that -- that's been referred
16 to in Appendix L.
17 So if -- if that plan is in any way --
18 if -- if Transport Canada either has something to
19 submit today for consideration by the Board or -- or
20 in the future, having looked at that; again, keeping
21 in mind that there is still time, should there be a
22 case for it, to look at plans or have a framework to
23 look at before the end of the environmental
24 assessment.
25 And I see that this is being brought up

1 today. In fairness, the Company has pointed out that
2 that -- there may be a plan that is in the DAR,
3 available to be reviewed.
4 Laura, if there's anything else, please
5 feel free to comment. But, obviously, this -- as I
6 say, that there are, in past instances where a
7 monitoring plan -- there's been a framework and before
8 the environmental assessment is over, there's been a
9 chance to comment on that.
10 So that's -- that's where I'm getting
11 at when I -- when I do speak to there being still an
12 opportunity at this point to -- to review that. It --
13 so it is still within the environmental assessment and
14 the Board's purview to look at that before the
15 environmental assessment is over, should that be
16 pointed out to the Review Board as needing con --
17 reconsideration within the environmental assessment.
18 MS. LAURA JONES: Laura, from
19 Transport Canada. I think we just had a
20 miscommunication on the term "plan", as there are
21 spill contingency plans. But the oil pollution
22 prevention plans and oil pollution emergency response
23 plans are specific, legislated plans, and they're
24 required under the Canada Shipping Act.
25 And if you require more information to

1 become aware of what your requirements are under the
2 Canada Shipping Act, then, yeah, of course, Transport
3 Canada is more than happy to communicate that with you
4 and to talk with you about it, if you need to know
5 what your requirements are.
6 So, those -- the contingency plans in
7 the DAR aren't the plans that I was referring to.
8 It's a separate set of plans that you will need to
9 submit, but I can definitely get you up to speed, or
10 Transport Canada and the Marine Safety Department can
11 get you up to speed, on those requirements.
12 And if any pertinent issues come up,
13 then I guess we can definitely forward those to the
14 Review Board for their consideration. Is that
15 satisfactory?
16 THE FACILITATOR MERCREDI: At any
17 time, for sure. I -- and, again, if any sidebar
18 discussions would solve this, you know, any
19 miscommunications or understandings, then indicate
20 that either there's been a resolution or not in
21 addition to that.
22 So I -- has that -- have we moved
23 somewhere, I hope, Laura? Is that to your
24 satisfaction?
25 MS. LAURA JONES: Laura, from

1 Transport. Yes.

2 THE FACILITATOR MERCREDI: Thank you.

3 And we're ready for the comment from Avalon.

4 MR. RICHARD HOOS: Yeah, Rick Hoos,

5 EBA Avalon. I guess I just want to make a comment on

6 the -- the NTCL shipboard oil pollution emergency

7 plan. That is NTCL's corporate plan to be implemented

8 for any oil spill emergencies in association with all

9 of the barges of fuel that they haul from Hay River

10 through Great Slave Lake to various communities; and

11 not only in Great Slave lake along the Mackenzie River

12 and the Western Arctic and formerly even the Eastern

13 Arctic.

14 And I'm -- without knowing for sure, I

15 -- I would be -- I firmly believe that this plan,

16 which is for their entire operation across the

17 Canadian Arctic waters, would have been approved by

18 Transport Canada. That is the plan that was submitted

19 in Appendix L, and it -- that plan is undoubtedly

20 updated by NTCL on a regular basis for their

21 continuing operations, because that is their business.

22 And as Avalon has indicated, Avalon is not in the

23 barging business, but whoever the barging contractor

24 is that is selected certainly will have to have those

25 plans in place, and they will have to be approved by

1 Transport Canada. Thank you.
2 THE FACILITATOR MERCREDI: And once
3 again, I -- it -- it's clear that -- positions are
4 clear on that. So I think some further discussion
5 would definitely help unless, Laura, do you have any
6 follow-up to that?
7 MS. LAURA JONES: Laura, from
8 Transport. No, I'd just like to move on to the next
9 question, if possible.
10 Okay, so this has to do with ships
11 routing over Great Slave Lake, which we discussed a
12 bit earlier. So Transport Canada requests that
13 Avalon, or whichever contractor you decide to go with,
14 provides information on the adequacy of chart and
15 bathymetric data related to vessels that will be used
16 and the proposed routes.
17 We would also like a copy of the route
18 diagram provided in slide 42 of the presentation
19 delivered by Avalon to start the technical meetings.
20 MR. RICHARD HOOS: Rick Hoos here,
21 Avalon. In preparing the DAR and in trying to assess
22 the possible effects of a -- of a barge incident on
23 Great Slave Lake, we had the opportunity to look at
24 the available charting for Great Slave Lake. And
25 there's basically two (2) primary charts and a couple

1 of little detailed insets.
2 And what has been done in the past by
3 the Hydrographic Service of Canada is they have done a
4 very thorough job of charting, I would say, the
5 western part of Great Slave Lake pretty well to the --
6 to the narrows. From the narrows to, let's say, the
7 end of -- of the lake charting is less detailed.
8 That's -- that's to the east of -- of the Nechalacho
9 project.
10 But they did enough charting to -- to -
11 - in the near-shore areas to know that those are also
12 the deepest parts of the lake. In fact, it's one (1)
13 of the deepest lakes in the world. But the very
14 deepest waters of Great Slave Lake are in the eastern
15 part of Great Slave Lake -- that is, to the east of
16 Nechalacho.
17 So I guess back to what I'm trying --
18 the point I'm trying to make is, from what we
19 understand, there is no issue with the quality or
20 accuracy of the nautical charts in the western Great
21 Slave Lake. And for the immediate areas around both
22 the Nechalacho dock site and the Pine Point dock site,
23 EBA was contracted to do shallow-water bathymetry.
24 And that report, I think, has also been provided to
25 the Board. So we have detailed bathymetry for the

1 near-shore waters as well.
2 MR. DAVID SWISHER: David Swisher,
3 with Avalon. You know, we can forward that to you,
4 just as we indicated in our sidebar discussions. But
5 in terms of relevancy, that information was provided
6 in the DAR. So as an aside, again, we can commit --
7 provide that to you if it's easier for you to
8 reference. Thank you.
9 THE FACILITATOR MERCREDI: And should
10 -- if there's an exchange of information in that and
11 should Transport Canada, or any other party during
12 those discussions, wish that that information be
13 considered by the Board, then again that -- it should
14 be forwarded to myself, as the lead EO for the file,
15 just so it's captured on the registry for the Board's
16 consideration.
17 MS. LAURA JONES: Laura, from
18 Transport. Yeah, I -- I am aware that that was in
19 your presentation. You had just explained in the
20 presentation that you'd switched up the proposed
21 barging routes based on wind, having a second route
22 from concerns with wind. I thought that the ship's
23 master proposed a second route based on if there's
24 potential high winds.
25 MR. DAVID SWISHER: It's David

1 Swisher. The -- the barge routes that were provided
2 in the presentation are the routes that are proposed.
3 MS. LAURA JONES: Laura, from
4 Transport. Yes, I understand that. I thought you
5 meant, when you gave the presentation, that they had
6 changed from the time that the DAR was submitted.
7 MR. DAVID SWISHER: It's David
8 Swisher. Yeah, from the time the DAR was submitted,
9 yes, that is correct.
10 MS. LAURA JONES: Okay, Laura Tra --
11 from Transport. Thank you. So, yeah, if we could
12 just get a copy of -- like we discussed in our sidebar
13 meeting, of that chart in high resolution, that would
14 be helpful.
15 MR. DAVID SWISHER: David Swisher,
16 with Avalon. Just to note, the Board does have a copy
17 of that in the presentation. I'll provide a separate
18 copy for Transport Canada.
19 THE FACILITATOR MERCREDI: Okay. And
20 just to clarify, I remember seeing a route on the
21 presentation yesterday. And -- and this is -- this is
22 the -- the one that's being referred to, correct? I'm
23 seeing affirmation from David and Laura. So -- and ob
24 -- obviously, the particulars of a route change or any
25 -- and any risk sodi -- associated with that, when it

1 comes to the barging of concentrate or any substances
2 across Great Slave Lake, this is within the -- the
3 Board's purview to consider.
4 So I -- I just want to clarify that
5 that particular diagram that you're talking about was
6 on there. So I think we've established that for sure,
7 so.
8 I know that Nathan had a comment just
9 on one (1) of the -- on one (1) of the last topic
10 exchanges. So I'll go to Nathan and then back to
11 Laura.
12 MR. NATHAN RICHEA: Thank you. It's
13 Nathan Richea, with the Water Resources Division,
14 Aboriginal Affairs. I kind of lost the context to my
15 comment. But I generally was thinking about a
16 question.
17 The concentrate that's produced by the
18 operation, does Avalon maintain ownership of the
19 concentrate from the north shore all the way through
20 to the railhead, and then down to the final, or does
21 that ownership get transferred to the contractors that
22 are transporting or moving the material back and
23 forth?
24 I'm just trying to get clarification.
25 Thanks.

1 MR. DAVID SWISHER: David Swisher,
2 with Avalon. Avalon maintains ownership. But with
3 any contract employee, they're required to deliver
4 specific products from point A to point B. And their
5 responsibility lies between point A and point B.
6 Thank you.
7 MR. NATHAN RICHEA: Thank you. It's
8 Nathan Richea, with the Water Resources Division.
9 Similarly, if you purchase oil or materials that you
10 need for your operat -- operation, does Avalon
11 purchase those materials from your transportation
12 provider or from a third party that provides those
13 things?
14 So do you maintain ownership of the
15 fuel and supplies that are being transported by those
16 various third-party contractors?
17 MR. DAVID SWISHER: It's David
18 Swisher, Avalon. Not until we receive it at site.
19 MR. NATHAN RICHEA: Thank you. It's
20 Nathan Richea with the Water Resources Division. So
21 not until you receive it at the Pine Point site for
22 materials and fuels used at that site and not until
23 you receive materials and fuels received at the North
24 Shore Thor Lake site? Can I clarify? Thanks.
25 MR. DAVID SWISHER: David Swisher,

1 Avalon. Yes. Can you please get to your point?
2 MR. NATHAN RICHEA: Thank you. It's
3 Nathan Richea with the Water Resources Division. My
4 point is that there'd be a shared responsibility
5 between the company transporting the materials and the
6 owner of the materials to ensure that the proper plans
7 and transportation reports are prepared and submitted
8 and approved. Thanks.
9 MR. DAVID SWISHER: David Swisher,
10 with Avalon.
11 THE FACILITATOR MERCREDI: Let me
12 first say --
13 MR. DAVID SWISHER: David Swisher with
14 Avalon.
15 THE FACILITATOR MERCREDI: -- that if
16 there are any more questions along that line of
17 questioning, you're welcome to ask them. Again, these
18 parties here are entitled to -- to -- along a certain
19 line of questioning, the particulars of the
20 transportation of these materials are under the
21 Board's purview to look at and consider.
22 So again, I'll -- I'll just say that if
23 there is a further line of questioning there, you are
24 welcome towards it and, again, Avalon is welcome to --
25 to respond, so. Thank you.

1 MR. DAVID SWISHER: David Swisher,
2 with Avalon. I don't think there was any intention of
3 saying that we weren't going to be sharing those
4 responsibilities with regards to the health and safety
5 and the corporate social responsibility. Thank you.
6 THE FACILITATOR MERCREDI: Thank you.
7 And, Nathan, anything further? No? Okay. And,
8 Laura.
9 MS. LAURA JONES: Laura, from
10 Transport. Just to follow-up on -- or, to touch on
11 Nathan's point. Transport is wondering whether or not
12 emergency response assistance plans have been
13 developed for any of the substances classified as
14 dangerous goods that Avalon will be transporting to
15 and from either of the project sites.
16 MR. DAVID SWISHER: David Swisher,
17 with Avalon. Yes, we'll be following all regulations,
18 including the TDGR regulations. Thank you.
19 MS. LAURA JONES: Laura, from
20 Transport. Just since we had some confusion on the
21 oil pollution plans, just to confirm with you that any
22 emergency response assistance plans have to be
23 reviewed and approved by Transport Canada.
24 MR. DAVID SWISHER: David Swisher,
25 with Avalon. Agreed. Thank you.

1 THE FACILITATOR MERCREDI: Laura, do
2 you have -- do you have anything -- any further
3 follow-up?
4 MS. LAURA JONES: Laura, from
5 Transport Canada. Maybe only to wonder when you'd
6 estimate that you'd have those plans in pla -- or,
7 developed?
8 MR. DAVID SWISHER: David Swisher,
9 with Avalon. In terms of particulars, that's where
10 I'm going to need information, as indicated before,
11 from Transport Canada, which I think you had indicated
12 in our sidebar you would be sending us, in terms of
13 what you do specifically need.
14 And then of course, when we -- at which
15 point when we finalize our agreements with the barging
16 contractor, then we will be pulling those plans
17 together.
18 I agree that Avalon shares interest in
19 making sure that environmental health and safety and
20 the corp -- corporate social responsibility of any
21 contractor that works for us, but we are not marine
22 experts. They are the experts. They develop the
23 plans. We will facilitate that those plans be
24 provided to Transport Canada. Thank you.
25 MS. LAURA JONES: Laura, from

1 Transport. I just wanted to clarify to everyone too
2 that emergency response assistance plans aren't just
3 for barging. It would be for rail and for shipping by
4 trucks as well.
5 MR. DAVID SWISHER: And in terms of
6 Avalon's operational components, that is part of the
7 plan to have that prior to operations, those plans,
8 and we'd be happy to share that with Transport Canada.
9 THE FACILITATOR MERCREDI: Thank you.
10 While we're still on the -- was there anything
11 further, Laura? No? Okay.
12 In the run up to 2:30, where we'll be
13 taking a break, is there any further comments or
14 questions on accidents and malfunctions? Ralph?
15 MR. RALPH GRISMALA: Ralph Grismala,
16 ICF Marbek. As part of the presentation, you had
17 mentioned some statistics or some information on the
18 safe history of barging. And I believe you said there
19 had been no sinkings in seventy-five (75) years.
20 Was that specific to Great Slave Lake?
21 And also, was the level and nature of the barge
22 traffic during that seventy-five (75) year period
23 comparable to what we're planning now, or is thi -- or
24 what you're planning now, or is this a substantial
25 increase in the frequency, size, or type of barging so

1 that those statistics or the past history may not
2 representative?
3 If you could just expand on that a bit.
4 MR. RICHARD HOOS: Rick Hoos, EBA
5 Avalon. I'm very familiar with a lot of the barging
6 activities that have taken place over the last fifty
7 (50) years or so in the North. And for construction
8 of the DEW Line sites across the North, almost all the
9 material for all the DEW Line sites was hauled up by
10 barges in the '50s.
11 In the early '80s, when the inter --
12 IPL, Interprovincial Pipe Line, which is now called
13 Enbridge, which brings up other issues, that pipeline
14 was constructed using equipment hauled up by barges.
15 All of the oil and gas activities in the Beaufort
16 Sea/Mackenzie Delta area, which were extremely
17 extensive, at one (1) point we have over two thousand
18 (2,000) people working in the Beaufort Sea and more
19 ships than the Canadian Navy. All the supplies for
20 all of those activities were brought up by barge --
21 barges, most of them up the Mackenzie Valley -- or, up
22 the Mackenzie River, sorry.
23 So there have been periods of time when
24 there have been large amounts of -- large -- high
25 levels of barging activity; frankly, considerably

1 larger and higher levels of activity than it being
2 contemplated for the Nechalacho project.
3 MR. DAVID SWISHER: David Swisher,
4 with Avalon. Also, Ralph, to answer your question,
5 the seventy-five (75) years was direct feedback from
6 NTCL through all their operations in the North, not
7 just the Great Slave Lake. There's more information
8 in the DAR on that as well, if -- we could find them
9 for you.
10 MR. RALPH GRISMALA: Ralph Grismala,
11 ICF Marbek. Thank you for that response.
12 THE FACILITATOR MERCREDI: Stephanie?
13 MS. STEPHANIE POOLE: Thank you.
14 Stephanie Poole, Akaitcho IMA office. I have a few
15 questions. And further to what Mr. Grismala was
16 saying in regards to industrial purposes and barging,
17 the way you gave some examples of the Mackenzie River
18 and -- and the Beaufort Sea and so forth.
19 But there has never been this amount of
20 barging, industrial-type barging, ever contemplated on
21 the east arm of Great Slave Lake. There's no
22 historical barging that has ever occurred in this
23 quantity, ever. So it will be the first time.
24 And I'm just looking at that slide and
25 the information provided by NTCL, where it says,

1 "Seventy-five (75) years with no incidents." And I
2 would say that that's completely false.
3 Living in the community of Lutsel K'e,
4 I know for a fact that almost every year NTCL has
5 problems barging in fuel to Lutsel K'e. Last year,
6 they got stuck on a sandbar because they were too
7 heavy with fuel. And they had to go back to Hay River
8 and offload half of it and make two (2) separate trips
9 to bring in the fuel to Lutsel K'e.
10 This summer, there was a barge that
11 came in that hit a rock and cracked a big hole in the
12 bottom of it. And they had to borrow cement from
13 community members to patch the hole and bring the
14 barge back to Hay River.
15 So there's a high risk of incidents
16 occurring when you're barging on the east arm of Great
17 Slave Lake. And to say that NTCL is the marine expert
18 -- and I would have to dispute that fact. Common
19 sense and history shows that they run into rocks and
20 sandbars all the time on the east arm.
21 I have questions regarding, you know,
22 these barges, when they do -- they will hit a rock.
23 They are going to hit a sandbar. There's going to be
24 problems. And what -- what will be the resp -- the
25 emergency response time to these barges?

1 But I'm guessing that you don't have
2 that answer for me, because you're relying on someone
3 else to provide you with those plans later on.
4 But we're very concerned with the
5 quantities of not only fuel and oil on these barges,
6 but also whatever hazardous materials you're shipping
7 on them. And we're very concerned with how long it's
8 going to take to respond to these barges when problems
9 do occur.
10 And I think there was something else.
11 Oh, a question for Transport Canada. The Akaitcho
12 Dene First Nations would like to know how they will be
13 involved in the process of issuing your authorization?
14 How will we be engaged, consulted, and accommodated in
15 the process of issuing that various Transport Canada
16 authorizations? Thank you.
17 THE FACILITATOR MERCREDI: Okay, we'll
18 go to Transport Canada first. Allow Avalon a moment
19 to caucus. And Laura?
20 MS. LAURA JONES: It's Laura from
21 Transport Canada. Some authorizations that Transport
22 Canada issues require consultation with aboriginal
23 peoples, as you know. And so actually, I can -- I
24 actually had a point to bring up about our sidebar
25 meeting. Just that we had spoken with Avalon to --

1 and expressed that we are interested in knowing any
2 consultation activities or engagement that Avalon has
3 conducted with aboriginal --
4 MS. STEPHANIE POOLE: Sorry.
5 MS. LAURA JONES: That's okay --
6 aboriginal people on concerns that they may have
7 related to navigation or authorizations issued by
8 Transport Canada, and had asked that they commit to
9 providing us an index with information that has been
10 provided to date in their engagement activities. And
11 Avalon agreed to doing so. Is that right?
12 MR. DAVID SWISHER: Yes, that's
13 correct, in terms of what's been provided to date
14 already to the Review Board, we'll provide to
15 Transport Canada. Thank you.
16 MS. LAURA JONES: Laura from
17 Transport. In a -- in an index, right? And then also
18 we'd request that any new information that comes up as
19 a result of today's technical session or further
20 engagement that you conduct also concern -- concerning
21 with -- sorry, concerned with navigation or
22 authorizations that we'd issue would also be forwarded
23 to us.
24 And, Stephanie, I would provide you
25 with our aboriginal consultation officer for the

1 project's contact information. And I'm sure she'd be
2 glad to speak with you on it. I'm not actually in
3 that end of things myself, but for sure she could
4 answer your questions and would be happy to.
5 THE FACILITATOR MERCREDI: There could
6 be homework here, or there couldn't be. Stephanie,
7 I'm going to go back to you, because your question was
8 directed to -- to Laura. So before we go to Avalon, I
9 just want to ask -- I'll let --
10 MS. STEPHANIE POOLE: Stephanie Poole,
11 Akaitcho IMA. She's just providing me with the name
12 and contact information now, so it doesn't have to be
13 a homework item. Thank you.
14 THE FACILITATOR MERCREDI: Very well.
15 Thank you. And -- okay, go ahead, David.
16 MR. DAVID SWISHER: Thanks. David
17 Swisher, Avalon. I just want to re -- respond back to
18 Stephanie on her comments. I agree wholeheartedly and
19 just want for the record to show that I did not state
20 that NTTL are the experts, and agree wholeheartedly
21 with that, which is why we have engaged four (4)
22 different barging companies with regards to our bid
23 process. So I do agree with Stephanie.
24 I do want to clarify, for the record,
25 that the presentation that was provided and what it

1 shows there, seventy-five (75) years with no incident,
2 probably the wrong word to use, because what that
3 meant was seventy-five (75) years with no barge
4 sinking in Great Slave Lake. So thanks for that
5 clarification, Stephanie.
6 MS. STEPHANIE POOLE: Stephanie Poole,
7 Akaitcho IMA. I just -- I just wanted to make it
8 clear for the record that -- that I know who the
9 marine experts are in regards to the east arm of the
10 Great Slave Lake. And -- and you won't find them in
11 the form of any kind of barging company. The marine
12 experts of the Great Slave Lake are -- are the
13 Akaitcho Dene and I just wanted to remind you of that.
14 Thank you.
15 THE FACILITATOR MERCREDI: Do you have
16 a follow-up comment at all?
17 MR. DAVID SWISHER: Dave Swisher.
18 Thank you.
19 THE FACILITATOR MERCREDI: Okay. We
20 will stay on the subject of accidents and
21 malfunctions, but we will take a ten (10) minute
22 break. So coffee, water, and snacks.
23
24 --- Upon recessing
25 --- Upon resuming

1 THE FACILITATOR TOOGOOD: Welcome
2 back, everyone. We'll get back on to the topic of
3 accidents and malfunctions. I'm just wondering if
4 there's any questions from the floor on this topic
5 before we change?
6
7 (BRIEF PAUSE)
8
9 THE FACILITATOR TOOGOOD: I'm seeing
10 no indication of questions. Avalon, do you have any
11 last words on accidents and malfunctions?
12
13 (BRIEF PAUSE)
14
15 THE FACILITATOR TOOGOOD: I'm seeing
16 no. Any -- I'm seeing no from the sound tech. Anyone
17 on the line?
18
19 (BRIEF PAUSE)
20
21 THE FACILITATOR TOOGOOD: So we'll
22 move on to mine waste management, waste rock tailings
23 for both sites. Avalon, did you have a presentation
24 on this?
25

(BRIEF PAUSE)

THE FACILITATOR TOOGOOD: Okay. Thank you very much. And if we can just get the lights turned off.

MINE WASTE MANAGEMENT, WASTE ROCK, AND TAILINGS, BOTH SITES:

PRESENTATION BY AVALON:

MR. DAVID SWISHER: Thank you. David Swisher with Avalon. I've got one (1) slide on waste management, and then I'll turn it over to Kevin Hawton with Knight Piesold to talk about the tailings management facility.

On the waste management, I just want to review, as a primer, the commitments that Avalon has, and it has to do really with some of the items that Albert also was asking earlier. Hazardous materials will not be incinerated at either site. Used oils will be burnt in approved and used oil heaters. Again, we're trying to reuse and minimize the amount of waste going out to other communities.

All solid, non-combustible and non-hazardous waste will be consolidated and disposed in approved landfills. Disposal of hazardous wastes in

1 an approved manner. Of course, those will have to be
2 in approved landfills and approved by the communities.
3 All solid wastes will be managed in accordance with
4 the NWT regulations, and Avalon will develop a
5 conceptual waste-management plan that complies with
6 all applicable legislation.
7 Those are the commitments that we have,
8 and of course I think, in the course of discussions,
9 we've talked about other commitments with regards to
10 incinerating combustibles, minimizing waste going to
11 the communities.
12 I'd like to now turn it over to Kevin
13 Hawton who wants to just do a quick review on the
14 tailings management facility, as well as some of the
15 waste rock management.
16 MR. KEVIN HAWTON: Kevin Hawton with
17 Knight Piesold. Just a bit of background. We've been
18 working with Avalon for about three (3) years now on
19 various aspects of the mine waste management, so we'll
20 get started with waste rock. This is -- I don't
21 expect anybody to, you know, analyze the numbers here,
22 but these are preliminary volumes for some of the
23 major earthworks items to construct the -- to
24 construct the project.
25 And what we're trying to show here is -

1 - the top line is the tonnage of pre-production waste
2 rock that's going to be produced before the mine
3 actually starts operating. And, you know, basically,
4 the 275,000 tonnes, at a density of two (2), is about
5 140,000 cubic metres.
6 For the overall construction, we need
7 approximately, you know, in the range of 300,000 cubic
8 metres, so it's just to show that, you know, the
9 balance is that all the waste rock, pre-production
10 waste rock, will get utilized in the construction, and
11 there will be some additional coring going into these
12 (MISSING AUDIO).
13 So next line, please. Yeah.
14 MR. DAVID SWISHER: Also, just to
15 confirm that, as we've indicated in the DAR, that
16 there will be -- we have temporary locations for the
17 waste rock on the surface that is brought up from
18 underground. But, as Kevin stated, all of the waste
19 rock that is on the surface will be consumed in the
20 construction activities.
21 MR. KEVIN HAWTON: Kevin Hawton with
22 Knight Piesold. Next slide. Yeah, and just to -- as
23 -- as David mentioned, what this graph shows is
24 basically the blue line is the -- is the waste rock
25 that accumulates at site during that pre-production

1 period. And, in summary, towards February 15, we'll
2 have the maximum amounts temporarily stockpiled of
3 about 60,000 cubic metres. And the other -- the --
4 the bar graphs just show the various components to
5 which the materials go into. And -- and then the
6 redline shows quarrying activities. So that's just
7 sort of a general overview.
8 So I think we'll move on. Okay. So
9 tailings design criteria. This is for the -- the
10 Nechalacho site. The current volume that we designed
11 for is 3.43 million cubic metres. This is a reduction
12 from what was reported in the DAR. As well, the
13 tailings will go out to the facility at 65 percent
14 solids, which again is another change from the DAR,
15 because I believe they were at 50 percent. And we
16 have an assum -- a -- a measured, based on lab
17 testing, dry -- dry density of 1.3 tonnes per cubic
18 metre.
19 The dams will be designed according --
20 as -- as we've talked about previously, according to
21 CDA. Based on their criteria we -- we designated this
22 facility as a significant with regard to risk versus
23 consequence and -- which therefore resulted in the
24 design of an emergency spillway of one (1) in a
25 thousand (1,000) year twenty-four (24) hour event, and

1 the maximum designed earthquake of one (1) in a
2 thousand year event, although the Thor -- Nechalacho
3 site is very low seismicity.
4 Freeboard allowances for the facility,
5 you know, as discussed previously we're going to have
6 a -- an EDS -- minimum EDS for a one (1) in twenty-
7 five (25) year storm event, although over the majority
8 of the life of the facility there will be a -- a much
9 greater capacity than that.
10 On top of that we have a -- a -- a
11 spillway which has an allowance -- the depth of the
12 spillway has an allowance to pass the IDF, which is
13 the one (1) in a thousand (1,000) year event, plus 1
14 metre of wave run-up. Okay.
15 So just a few points on how we're going
16 to operate this facility. Basically, you know, the --
17 the tailings are going into the -- the Ring and Buck
18 Lake system basin. You know, we'll have perimeter
19 containment which will be provided by rock fill
20 embankments that have the upstream face lined. The --
21 the embankments will be founded on competent bedrock
22 around the entire perimeter and the liner will be tied
23 into the bedrock.
24 Tailings will be deposited from the
25 western side of the facility towards the east to form

1 a gently sloping beach, forcing the water towards the
2 -- the east side where the polishing pond will be.
3 The tailings will be dep -- deposited through a
4 combination of end discharge -- end of pipe discharge
5 and spigotting. And, you know, the key factors that
6 will influence what type of deposition happens when
7 will be sort of the climatic conditions with end of
8 pipe discharge more focussed towards the winter.
9 Additional clean waters from the -- the
10 mine, the process -- the process plant area, et cetera
11 will -- will also be sent out to the TMF, which will
12 help dilution. There's a separator dike between the
13 tailings and the polishing pond. That'll be
14 constructed of mine waste rock. And then the
15 supernatant and runoff will be -- will be routed
16 through that dike and will accumulate in the polishing
17 pond at the east side of the facility where ultimately
18 the water will be released via pump barge to Drizzle
19 Lake.
20 Between year 7 and 9, sort of what
21 we're unofficially calling Phase 2, the separator dike
22 will be allowed to -- overtop, but we'll have a
23 separate separator dike in place if required to form
24 the polishing pond at -- a little further towards the
25 east side.

1 And, you know, discharge from the
2 facility will be maintained to follow the natural
3 hydrologic patterns to the maximum degree possible.
4 So, you know, as we've talked about before, there --
5 there won't be winter discharge, because there's
6 historically no flows from that basin in the winter,
7 et cetera.
8 Okay. So this -- this is basically a -
9 - a layout of the facility and it shows up to -- yeah,
10 do you have the -- thanks. And -- and this is a good
11 figure, because it -- it really shows you how limited
12 the amount of embankment construction is.
13 Basically, the -- the -- these show the
14 embankments here. And as you can see, it's only a
15 small portion of the perimeter, and there's another
16 small little one (1) here and a couple small saddles
17 here.
18 And the re -- the -- the rest of the
19 containment is provided by the natural bedrock
20 topography, so, you know, that's a real bonus. The
21 initial separator dike sits here and the tailings are
22 discharged, like I said, from the west to the east
23 from this embankment. Okay.
24 UNIDENTIFIED SPEAKER: And this is
25 years 1 through 9?

1 MR. KEVIN HAWTON: This -- this is
2 years 1 through 7 to 9, somewhere in there. Okay, and
3 this just shows the -- the end of -- end of operations
4 layout for the facility. And so here's -- was where
5 the separator dike was. It's been allowed to overtop.
6 The new separator dike, if required, is
7 here, forming the polishing pond, and here's the
8 discharge barge pumping the water into a channel. I
9 don't know that there's much more to say about that.
10 It's -- yeah.
11 UNIDENTIFIED SPEAKER: So years 1
12 through 9.
13 MR. KEVIN HAWTON: Yeah, years 1
14 through 9, years 9 through 20.
15 So as you all are aware, there's
16 tailings also at the hydrometallurgical site. A
17 little simpler concept here; the tailings will be
18 deposited into the historic L-37 pit right here. And
19 there -- there's the plant site, just for reference.
20 Fresh water to the process will be
21 taken from the J-44 pit, which is located here. And,
22 if required, excess water from the -- from the HTF
23 will be transferred to the N-42 pit for infiltration
24 into the underlying aquifer.
25 So just a few of the key criteria that

1 we used so far in the design. And I think
2 optimizations are obviously ongoing, so these numbers
3 are, you know, likely to change. But what we're
4 dealing with there is 3.8 million cubic metres of --
5 of tailings for the life of mine.
6 The planned solids content was about 40
7 percent, and we've had a -- an assumed very
8 conservative dry density of point nine (.9). Now some
9 initial testing's starting to come in that's in -- in
10 saying that we're probably going to achieve much
11 higher densities than that. But it's still early.
12 Basically, to construct this facility,
13 the pit floor will be graded. There's existing mine
14 waste rock piles in the bottom of the pit to form a
15 nice, level surface. We'll also construct a -- a
16 separator dike at the, sort of, the northeast portion
17 of the pond. And then end of pipe discharge will be
18 from the -- from the southwest side of the facility to
19 form a sloping beach up to that separator dike.
20 Supernatant and runoff will infiltrate
21 through, or decant through, the -- across the -- the
22 dike into the -- the east pond and will infiltrate
23 into the groundwater aquifer. And as I mentioned, any
24 excess water will be transferred to the N-42 pit for
25 further infiltration.

1 So this just shows sort of the initial
2 layout of the facility. Those separator dikes I
3 mentioned are here. And this is up to basically year
4 2. Discharge will be from the southwest side, like I
5 said. And there's probably going to be two (2) or
6 three (3) possible discharge locations that'll get
7 varied to ensure that we're filling the basin -- the
8 pit evenly.
9 And then this just shows sort of the --
10 the ultimate layout and -- and what it would look
11 like. Just a note, there are large stockpiles of till
12 around the perimeter of the pit.
13 And these would -- would likely used,
14 both for some of the basin prepara -- some of the pit
15 preparation in the bottom, as well as they -- they're
16 available to be used at closure for -- for covering
17 the tailings. So that's pretty much it. And we'll go
18 from there, so, yeah.
19
20 QUESTION PERIOD:
21 THE FACILITATOR TOOGOOD: Thank you
22 very much for that presentation. I'll open the floor
23 up for questions. Any questions from the floor?
24 Nathan...? All right, Ralph?
25 MR. RALPH GRISMALA: Ralph Grismala,

ICF Marbek. Just a quick one (1). The solids contents there, was that percent by weight?

MR. KEVIN HAWTON: Kevin Hawton here. Yes, that is.

THE FACILITATOR TOOGOOD: Any other questions from the floor? Nathan...?

MR. NATHAN RICHEA: Thank you. It's Nathan Richea, with the Water Resources Division. I was just wondering if we can go back one (1) slide to the -- I think it's the -- the pit for the hydrometallurgical site?

That blue arrow there on the northern part of the figure, is that a spillway, or can you explain? Thanks.

MR. DAVID SWISHER: David Swisher, with Avalon. No, that's not a spillway. That's just an indication of the general groundwater flow that we know of.

MR. KEVIN HAWTON: Actually, it -- it's not a spillway. What it is, is it's just a channel that would -- I mean there's virtually no risk of -- of -- of this pit filling up, but, you know, to be diligent we've included an arrow that shows that, if required, a channel would be put in place to -- to control where the -- where -- where any overtopping

1 would happen.
2 It's basically the low spot around the
3 perimeter of the -- of the pit, that's all.
4 MR. DAVID SWISHER: David Swisher. I
5 apologize for that and will not interfere with Kevin
6 responding next time.
7 MR. NATHAN RICHEA: Thank you. It's
8 Nathan Richea, with the Water Resources Division. I
9 think what you have proposed right now is to dispose
10 of water from that facility there into the aquifer.
11 So, in the event that that pit starts
12 to fill up where it may actually intercept a -- a
13 channel where a discharge may occur to the surface, I
14 believe the contingency for that would be to
15 additionally pump water to N-42 pit to avoid surface
16 water discharge.
17 Could I confirm that that's what the
18 Company is proposing? Thanks.
19 MR. KEVIN HAWTON: That's correct.
20 The water will get pumped to N-42.
21 THE FACILITATOR TOOGOOD: And that was
22 Kevin Hawton with -- for Avalon.
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea with the Water Resources Division. So
25 am I safe to assume that that will not be part of the

1 proposed project for tailings management at the
2 Nechalacho project site, the spillway, the channel,
3 the surface discharge, if the water level increased in
4 the pit to a point where it would overtop and go into
5 the surface?
6 MR. DAVID SWISHER: David Swisher,
7 with Avalon. Yes, that's probably why I responded the
8 way I did, because I was unaware of that. It will not
9 be a part of the plan. So I apologize, Kevin, but I'm
10 stepping on you now. Thank you.
11 And ironically that is the general flow
12 of the groundwater, and that's what I thought it was.
13 But, no, we will not have that. I can assure you
14 that. It's the N-42 pit which is the discharge pit.
15 I can also say that the designs that
16 were done here were based on a worst-case scenario for
17 the amount of fill just to show that this L-37 pit has
18 the capacity for the full twenty (20) year operation.
19 Thanks.
20 MR. NATHAN RICHEA: Thank you. It's
21 Nathan Richea with the Water Resources Division. Can
22 I just get a commitment that that figure will be
23 updated to remove that portion just so that the
24 record's clear and we don't have a presentation that
25 has an incorrect...

1 THE FACILITATOR MERCREDI: And on --
2 on that, again, we spoke of this yesterday about
3 having a clear line of evidence; that is for the
4 Board's consideration. So along those lines, I think
5 that's a reasonable request. We'll have Avalon
6 respond to that.
7 MR. DAVID SWISHER: David Swisher,
8 Avalon. Yes, and we're committed not to utilize that
9 portion of -- sorry, what is the Board asking for
10 specifically?
11 THE FACILITATOR MERCREDI: First of
12 all, these presentations for -- first of all, can
13 Avalon email today's presentations, the primary
14 presentations, number 1?
15 Number 2, I believe on the presentation
16 for the slide that's on the screen now, it appears
17 that arrow has been cau -- lead to some confusion, and
18 -- and just to -- for that -- for that to be
19 clarified. I -- I'd like to capture exactly --
20 because I'm sure Avalon has thoughts for that arrow,
21 and -- and just -- I'm sure it may have been
22 misinterpreted.
23 So, I'd like to kind of -- so number 1,
24 we have the presentation coming to the Board, the
25 primers for each topic.

1 Nathan, could you elaborate on that?
2 Thanks.
3 MR. NATHAN RICHEA: Thank you. It's
4 Nathan Richea, with the Water Resources Division. I
5 believe -- my understanding of the project is that
6 water for tailings management at the HTF facility will
7 be, one, discharged into this pit. I think this is --
8 I might get the number wrong -- L-37 pit. And then
9 any excess water that doesn't infiltrate in that pit
10 will be pumped to the N-42 pit such that any tailings
11 water at that site will only report to the the aquifer
12 and not to surface. So there's no need for a
13 spillway. And there's no need for water to escape
14 that original pit to potentially get to surface and
15 surface waters because then we got some discussions on
16 objectives.
17 So I just wanted to have this slide
18 clarified, that there will not be a discharge or
19 spillway or natural channel that will basically allow
20 the water to get to the surface.
21 The contingency, if the water level
22 increased in that pit, would be additional pumping if
23 required to move that water to the N-42 pit.
24 THE FACILITATOR TOOGOOD: And -- and
25 before Avalon responds I'll read into the record what

1 the current slide that is being discussed, slide 30.
2 There is kind of a northeast arrow leading from the --
3 the tailings facility. Avalon will clarify that.
4 MR. DAVID SWISHER: David Swisher,
5 Avalon. Avalon agrees with Nathan's assessment. And
6 we can provide an updated map.
7 THE FACILITATOR TOOGOOD: Thank you.
8 MR. NATHAN RICHEA: Thank you. It's
9 Nathan Richea with the Water Resources Division.
10 There was some discussion of, I guess, the dry density
11 and the solids content of the tailings that we'll
12 report to this facility. I was just wondering, do you
13 have any idea of the percent saturation once the
14 tailings are disposed into this pit and how it may
15 dry, I guess, over the life of mine, and I guess what
16 -- how solid the tailings will be?
17 I think we'll get into closure next,
18 but where I'm going with this is will it be able to
19 support a closure cover, or will there be heaving or
20 fracturing ca -- occurring. So I'm trying to get an
21 idea of the saturation point and -- and how the
22 facility will behave as far as liquid content and
23 saturation over time for the life of project.
24 MR. KEVIN HAWTON: We don't have
25 specific informa -- Kevin Hawton, sorry. We don't

have specific information on -- on the exact consistency of the tailings after it's consolidated.

What we do have is encouraging latest lab testing that says that it's densifying much better than we thought. We assumed the worst when we did -- submitted the DAR at point nine (.9), you know, a density of .9 tonnes per cubic metre.

So we -- you know, we fully -- we firmly believe that we'll be able to close it. It may take a couple more years than, say, for the Nechalacho site. But as a contingency, we would probably consider using geotextile or covering it in the wi -- in the winter when it's frozen at surface.

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. At this point in time, do you envision the tailings to report to the facility in a slurry type form, or will it be more thicker like a paste or toothpaste type consistency?

MR. KEVIN HAWTON: Kevin Hawton. It will report to the facility as a slurry.

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. Yeah, and I think the percent solids to water was about 60 percent water and 40 percent solids, was that

1 correct, from the previous slide?
2 MR. KEVIN HAWTON: That's correct.
3 Kevin Hawton.
4 MR. NATHAN RICHEA: Thank you. It's
5 Nathan Richea with the Water Resources Division. Have
6 you accounted for the potential for that water to --
7 the pour water to increase in concentration over the
8 course of the operation due to (MISSING AUDIO)
9 concentration?
10 Other northern operations have
11 experienced freezing temperatures in the wintertime
12 that creates icing and expuls -- expulsion of
13 parameters, causing the pour water concentrations to
14 increase quite a bit from what the quality of water
15 that was reported to the facility was in the first
16 place. The concept is called cryoconcentration.
17 Have you conta -- have you accounted
18 for that in the quality of the water in the -- the
19 water that will be reported to the north section of
20 the -- you know, the polishing pond?
21 MR. KEVIN HAWTON: Kevin Hawton here.
22 I mean, I won't be able to answer all those questions,
23 so I'll defer some to -- to Rick or David. But, you
24 know, there is no permafrost in this area. We don't
25 expect there to be any long-term icing within the

1 tailings at this site. So that's my comment.
2 MR. DAVID SWISHER: David Swisher with
3 Avalon. Yeah, to -- to add to that, a bit different
4 than some of the northern -- more northern climates
5 where there's higher winds that are not buffeted by
6 some of the -- the boreal forest in this area. And
7 the benefit of being able to have this in a pit
8 subsurface, if you will, I think contribute to
9 minimizing that risk.
10 MR. NATHAN RICHEA: Thank you. It's
11 Nathan Richea with the Water Resources Division. Are
12 you planning to dispose of tailings during the winter
13 period?
14 MR. DAVID SWISHER: David Swisher with
15 Avalon. Yes.
16 MR. NATHAN RICHEA: Thank you. It's
17 Nathan Richea with the Water Resources Division. And
18 as the -- the project progresses, there'll be layers
19 of tailings that will accrue on top of each other,
20 some during -- deposited during the summer, and some
21 that are deposited during the winter.
22 Because of our cold temperatures up
23 here, when the tailings are depo -- deposited in the
24 winter time, they're subjected to freezing
25 temperatures. And lenses and la -- layers of frozen

1 tailings accrue in your tailings facility.
2 And over time, the potential exists for
3 permafrost to aggrade in that facility, particularly
4 as the cover starts to depth -- the deep -- the depth
5 of the cover increases over time.
6 So I was just wondering if you've
7 accounted for -- for using areas within your tailings
8 facility and the potential for prior concentration?
9 MR. KEVIN HAWTON: Kevin Hawton here.
10 Yeah, that's something we do typically account for on
11 facilities that have a higher rate of rise than this
12 one (1). What we're dealing with here is basically
13 once things get established down in the very bottom, a
14 rate of rise of approximately a metre. So we don't --
15 we totally believe that the -- the -- all ice will
16 thaw during the summer.
17 MR. NATHAN RICHEA: Thank you. It's
18 Nathan Richea with the Water Resources Division. I
19 guess I'm just going to get back to the previous
20 discussion I had about the potential for that facility
21 to stay moist during final closure and whether or not
22 it's got a quite a high degree of fines compared to
23 the regular tailings that we see?
24 I think during the scoping and some of
25 the information that's been presented it's more of,

1 like, a gypsum type tailings, which will be very fine.
2 I was just wondering if you could
3 comment a bit more about, you mentioned geotextiles
4 and -- and things like that for cover materials. And
5 what contingencies would be in place if, for some
6 reason, the facility is not stable enough to support a
7 cover at the end of operations?
8 MR. DAVID SWISHER: David Swisher with
9 Avalon. Yeah, in speaking with Knight Piesold and --
10 and the experts on that, obviously the test work now
11 is indicating that we can pass over it at the end of -
12 - of closure. That's the initial plan.
13 The back up or contingency plan to that
14 is actually wait for the winter time to be able to
15 place a -- a cover over that, utilizing mechanized
16 equipment to facilitate that process.
17 MR. NATHAN RICHEA: Thank you. It's
18 Nathan Richea with the Water Resources Division. And
19 I guess you would engineer that cover to ensure that
20 it doesn't subside during the summer if the frozen
21 layer on top of the facility thaws, as you discussed,
22 I guess, previously? Thanks.
23 MR. DAVID SWISHER: David Swisher with
24 Avalon. Yes, we'll have a lot of backup information
25 by that point, and we'll be able to assess the

1 situation at that time to -- to take into account any
2 further mitigations that -- that maybe we should
3 implement that we haven't thought of at this point.
4 MR. NATHAN RICHEA: Thank you. It's
5 Nathan Richea with the Water Resources Division. I
6 guess -- thank you for the answer. It -- it's a good
7 answer to the question. I guess what I'm trying to
8 think about now is when the tailings are disposed into
9 that -- that pit, because of the fine content of the
10 tailings, there is a potential for that bottom of that
11 pit to start to blind off during the course of the
12 operations.
13 So one (1), there would be more water
14 accruing within the pit that would may need to be
15 moved to the N-42 pit. But also, that there may be
16 more saturation that may occur within the tailings
17 over time, over the twenty (20) year period.
18 Do you have any idea of how long, if
19 the tailings become more saturated than what you have
20 projected at this time, how long that would take to,
21 sort of, dry and, I guess, percolate or infiltrate
22 prior to final closure of the -- of the site?
23 MR. RICHARD HOOS: Rick Hoos, Avalon,
24 well- known engineer. What I was suggesting to David
25 is that the -- the lower depths of the tailings

1 deposit in that L-37 pit are likely never going to
2 completely dry out, and they may remain, in fact,
3 fairly saturated.
4 But the point that has been made is
5 that -- well, even from the most recent information,
6 it seems that this material can be -- will be more
7 trafficable than was first thought, but beyond that,
8 even if it isn't, the plan is to put, perhaps, geotech
9 style and certainly significant cover over the top of
10 these tailings when the pond -- when the tailings pond
11 is prepared for closure.
12 So it shouldn't matter that tailings --
13 deeper tailings in the deposit remain saturated, or if
14 not saturated, then still quite moist.
15 MR. KEVIN HAWTON: Kevin Hawton with
16 Knight Piesold. I'll just add something related to --
17 the preliminary results we're seeing coming in, they
18 are actually undrained settling tests, and we're
19 getting higher densities than what we assumed for our
20 drain settling tests before, so like I said, it's
21 encouraging, and we believe we're not going to have a
22 serious problem, and we should be able to cover this.
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea with the Water Resources Division. So I
25 think there was some discussion yesterday about a

1 commitment's table. Maybe one (1) way to help resolve
2 the issue would be to have one (1) -- a contingency
3 that in the event that it's not trafficable during the
4 summertime, construction would occur during the
5 winter, and the engineering would be designed
6 appropriately to maintain the stability.
7 It would help in the process to -- in
8 the assessment of the project, but obviously there's
9 still some uncertainty on how the tailings will
10 behave. And during operations, another commitment
11 would be to monitor the tailings within the tailings
12 facility and to assess the saturation level and the
13 trafficability.
14 That might hep, I think, in the process
15 of understanding what the impact may be at closure.
16 So I was wondering if the company could commit to
17 those two (2) things. Thanks.
18 MR. DAVID SWISHER: Holy crow, Nathan,
19 it took you a long time to get to the point. David
20 Swisher with Avalon. Yes, I -- I think that's a -- a
21 very reasonable commitment that Avalon is -- is fine
22 with committing to.
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea with the Water Resources Division.
25 Yeah, I -- I have a bunch of lines of evidence there

that -- and from experience, there's a lot of uncertainty in tailings facilities, so I -- I wanted to get that all on the record, so I'll take as much time as I'll like.

But as far as the HTF facility, I don't know if I have any other questions, so I can -- and -- if someone else has any questions.

(BRIEF PAUSE)

THE FACILITATOR TOOGOOD: Within that exchange I -- I know that there was some -- it sounded like there is sugg -- commitments suggested, and I don't know that there was any given. So again, I'll throw that out there.

I mean, do we -- is there something that should be taken down as a commitment there, or is -- was that adequate? I'm going to put that out there, Nathan.

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. Yeah, I had proposed two (2) commitments. One (1) was in the contingency case that the cover could not be placed during the summer, the cover would be placed during the wintertime, and it would be engineered

1 sufficiently to withstand the potential fall the
2 following season, summer season.
3 I believe they agreed to provide that
4 in the commitment table, but I'll let the proponent
5 speak for itself. The other commitment I had was that
6 they would commit to monitor the tailings within the
7 facility over the course of the operations to a -- to
8 want affirm -- or confirm the saturation level of the
9 tailings that accrue in there over time and to ensure
10 the trafficability and stability of those table --
11 those tailings over the long term.
12 And I also believe that they agreed,
13 but I'll let them answer that question, please.
14 THE FACILITATOR TOOGOOD: And -- and,
15 so, yeah. I -- thank you, but obviously this is
16 Avalon's position, its opportunity to comment on that
17 whether or not it was something that they would adopt
18 because obviously it is Avalon's project. David...?
19 MR. DAVID SWISHER: Yeah, other than
20 ribbing Nathan earlier, we -- we agree that that is a
21 reasonable commitment. Both of those commitments are
22 reasonable to follow through with, and we can include
23 those in our commitment's table as part of our
24 undertaking that we'll be providing.
25 I think it was Undertaking number 1 or,

1 that we'll be providing in the next couple of weeks.
2 THE FACILITATOR TOOGOOD: Okay because
3 it is a commitment and we do want to capture it just
4 for -- for Avalon's and -- and all parties and the
5 Review Board, I think I see smoke rising from
6 Shannon's keyboard, so I'll turn the mic to Shannon;
7 see if she caught that.
8 MS. SHANNON HAYDEN: It's Shannon with
9 the Review Board. I might need some help with the
10 wording, Nathan.
11 For the first commitment I have:
12 "Avalon commits to conducting
13 trafficability monitoring on the
14 tailings pond and will commit to
15 carrying out construction activities
16 only in the winter as a
17 contingency."
18 I'm not really sure how to word it. I
19 guess if -- if it's not really trafficable in the
20 spring.
21 Do you have a better way for me to
22 maybe write this up?
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea with the Water Resources Division.
25 Yeah, I think the first commitment was that -- the

1 contingency, they would commit to a contingency of
2 placing the cover during the winter and designing it
3 to a standard sufficient to ensure integrity of the
4 cover during the following summer season or thaw.
5 MS. SHANNON HAYDEN: Okay, it's
6 Shannon again with the Review Board. That was really
7 faster than I can type.
8 MR. NATHAN RICHEA: I tried to slow
9 down. It's Nathan Richea. See if I can remember what
10 I said. I think I said the commitment would be to, as
11 a contingency, commit to place the cover during the
12 wintertime and design it sufficiently to maintain
13 stability during the sum -- the following summer or
14 thaw period.
15 I don't know, it doesn't sound as good
16 the second time.
17 THE FACILITATOR TOOGOOD: And
18 obviously, it's -- it's in fairness to Avalon if they
19 are going to make a commitment, it does need to be
20 achievable, so getting the wording right, and we're
21 taking some time, so.
22 Shannon...?
23 MS. SHANNON HAYDEN: Okay, I'm really
24 sorry. Shannon with the review board. I have:
25 "Avalon commits to a contingency of

1 placing a tailings cover during the
2 winter and design it sufficiently to
3 maintain stability for the following
4 summer thaw period."
5 MR. NATHAN RICHEA: Thank you. It's
6 Nathan Richea. Yeah, and I guess it would be
7 stability in general, but obviously the first thaw
8 would be the most important. But you might want to
9 include beyond the first year just because it needs to
10 be maintained for some time.
11 So include what you have, and then
12 maybe add "for life of project" or...
13 MS. SHANNON HAYDEN: Okay, Shannon
14 with the Review Board.
15 "Avalon commits to a contingency of
16 placing a tailings cover during the
17 winter and designing it sufficiently
18 to maintain stability for the
19 following summer thaw period and
20 maintain for life of project."
21 MR. NATHAN RICHEA: Thank you. No, we
22 should remove "the life of project" 'cause the
23 project's over. This is in closure. So it should be
24 for a longer term -- perpetuity.
25 MS. SHANNON HAYDEN: Okay, Shannon

with the Review Board.

"Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain stability for the following summer thaw period and maintain for perpetuity."

THE FACILITATOR TOOGOOD: Okay, Nathan. Does that capture the concern?

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. Yeah, that's the first commitment. There's the second one that I can get to now.

THE FACILITATOR TOOGOOD: And before -- before we get to that second one, I do -- Avalon does need to comment. It is their commitment, so. And, Shannon, David asked off mic if you could read it again. Please read it again.

MS. SHANNON HAYDEN: Shannon with the Review Board.

"Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain stability for the following summer thaw period and

1 maintain for per -- perpetuity."
2 MR. DAVID SWISHER: David Swisher with
3 Avalon. I think the "maintain perpetuity" part, I --
4 as Nathan is also shaking his head, should probably be
5 modified. I'd let Nathan suggest a -- an alternative
6 there.
7 THE FACILITATOR TOOGOOD: After closure
8 I'll -- I'll suggest one (1). Would apture -- after
9 closure capture it?
10 MR. NATHAN RICHEA: It's Nathan Richea
11 with the Water Resources Division. Yeah, it might be
12 better now that we've talking this through to include
13 long-term stability first, and then after that include
14 the -- the thaw period the following summer, right,
15 because that's what we're designing it for, long-term
16 stability, including thaw periods.
17 THE FACILITATOR TOOGOOD: While Shannon
18 types that out, this is -- this -- this type of
19 positive stuff is what -- is what technical sessions
20 are for, so. I know it might be painful in the back
21 of the room, but this is definitely good. Shannon...?
22 MS. SHANNON HAYDEN: Okay, Shannon,
23 with the Review Board. Hopefully this is the last
24 one.
25 "Avalon commits to a contingency of

placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods."

THE FACILITATOR TOOGOOD: Okay. And, Nathan, does that capture it?

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. Yeah, that's fine with me.

THE FACILITATOR TOOGOOD: Thank you. And, Avalon, is that -- is that a commitment that -- I'll let Avalon comment on that.

MR. DAVID SWISHER: Dave Swisher, Avalon. Yes, that's fine.

--- COMMITMENT NO. 3: Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods

THE FACILITATOR TOOGOOD: Thank you.

1 And the second one.
2 MR. NATHAN RICHEA: Thank you. It's
3 Nathan Richea with the Water Resources Division.
4 Yeah, the second proposed commitment was for
5 monitoring during operations to confirm saturation
6 levels within the tailings and ensure trafficability
7 at the end of mine for closure and placing --
8 placement of the cover. I guess I'll put it that way.
9 MS. SHANNON HAYDEN: Okay, it's
10 Shannon, with the Review Board. I have:
11 "Avalon commits to monitoring
12 tailings during operations within
13 the facility to confirm saturation
14 levels and ensure trafficability at
15 the cover at the end of closure."
16 MR. NATHAN RICHEA: Thank you. It's
17 Nathan Richea with the Water Resources Division. I
18 think it should be trafficability for closure and
19 placement of the cover.
20 MS. SHANNON HAYDEN: Shannon, for the
21 Review Board.
22 "Avalon commits to monitoring
23 tailings during operations within
24 the facility to confirm saturation
25 levels and ensure trafficability for

closure and placement of the cover."

THE FACILITATOR TOOGOOD: Thank -- how does that read, Nathan?

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. Yeah, I think it reads fine. I think we should probably specify that it's for the -- the pit, L-37, for both of those commitments, right, because there's a couple tailings facilities, right, if we don't specify. Thanks.

THE FACILITATOR TOOGOOD: And just to clarify, that's for both pits at the Pine Point site, the -- the HMF site, to be captured in the first one and the second commitment that we're -- can you please read the first one? Yes, please, yeah.

MS. SHANNON HAYDEN: Avalon commit -- oh, Shannon, with the Review Board.

"Avalon commits to a contingency of placing a tailings cover during winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the L-37 tailings facility."

And the second:

"Avalon commits to monitoring

tailings during operations within the L-37 tailings facility to confirm saturation levels and ensure traffic ability for closure and placement of a cover."

--- COMMITMENT NO. 4: Avalon commits to a contingency of placing a tailings cover during winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the L-37 tailings facility

--- COMMITMENT NO. 5: Avalon commits to monitoring tailings during operations within the L-37 tailings facility to confirm saturation levels and ensure traffic ability for closure and placement of a cover

1 MR. DAVID SWISHER: David Swisher with
2 Avalon. Yeah, I'm okay with both of those.
3 THE FACILITATOR TOOGOOD: Very well.
4 And I see Nathan nodding in affirmation that that's a
5 good read. So thank you to Avalon for -- for making
6 those commitments. And -- and we'll move on with the
7 discussion. And thank you to Shannon for her patience
8 at the -- the keyboard.
9 Were there any further comments on --
10 on this topic? Nathan...?
11 MR. NATHAN RICHEA: Thank you. It's
12 Nathan Richea with the Water Resources Division. I
13 didn't have any other comments for the hydromet
14 facility. I just had some comments for -- or I guess
15 questions for the Thor Lake project site.
16 I wonder if it would be best to pull up
17 the -- the slide that had the tailings facility at the
18 Thor Lake site? So I was wondering if we have the
19 elevation of the operating level, the water operating
20 level, for the tailings containment facility at the
21 polishing pond?
22 MR. KEVIN HAWTON: Kevin Hawton with
23 Knight Piesold. I don't have that here, and it's --
24 no, I don't.
25 MR. NATHAN RICHEA: Thank you. It's

1 Nathan Richea with the Water Resources Division. Can
2 we get that number provided as homework or some
3 mechanism?
4 MR. KEVIN HAWTON: Kevin Hawton with
5 Knight Piesold. Yes, we can get that number for you.
6 THE FACILITATOR TOOGOOD: Homework.
7 More homework. Shannon -- we'll go to Shannon for the
8 reading of that one.
9 MS. SHANNON HAYDEN: Shannon with the
10 Review Board. I was distracted with the light. Can
11 you repeat?
12 MR. NATHAN RICHEA: Thank you. It's
13 Nathan Richea with the Water Resources Division. I
14 have, like, three (3), like, 15(a), (b), and (c)
15 questions here, so I might go through them all, and
16 then that way we can contain it all into one (1)
17 homework item.
18 I was also looking for the elevation of
19 the base of the spillway. Do you have that one?
20 Okay. So sorry.
21 MR. KEVIN HAWTON: Kevin Hawton with
22 Knight Piesold. The spillway invert would be at
23 elevation 250.
24 MR. NATHAN RICHEA: Thank you. It's
25 Nathan Richea with the Water Resources Division.

1 Yeah, the homework item was: What is the elevation of
2 the operating level within the polishing pond for the
3 tailings containment facility?
4 MR. DAVID SWISHER: David Swisher,
5 Avalon. I -- I'd like to maybe clarify that homework
6 item. The operating level fluctuates through time,
7 and so are you asking for, say, the year 19/ year 20,
8 which would be the maximum operating level? Because
9 earlier, there may not be necessarily an operating
10 level, but the -- part of the Buck Lake.
11 MR. NATHAN RICHEA: Thank you. It's
12 Nathan Richea, the Water Resources Division. Yes,
13 it's later years of the mine life, so I guess
14 specifically the figure years 9 to 20, but I'm more
15 interested in years 18 through 20. Thanks.
16 MR. DAVID SWISHER: David Swisher with
17 Avalon. Okay. We -- the figure that you're looking
18 at represents the year 20 tailings, and so if -- if
19 it's applicable for that, we can provide that
20 information for that as homework. Thank you.
21 MR. RALPH GRISMALA: Ralph Grismala,
22 ICF Marbek. If that figure has high enough
23 resolution, you may be able to get the elevation from
24 the contours at the edge of the water there, if it's
25 drawn accurately, but I see some people shaking their

fingers, so okay.

Also, you had mentioned earlier that you had 1 metre freeboard plus capacity of, I think, 46 centimetres for the twenty-five (25) year storm, so if -- subtracting that from the spillway invert gives you the max operating level. Is that -- sound right? All right. Just checking.

MR. DAVID SWISHER: David Swisher with Avalon. Ralph, I -- I appreciate your -- your calculations there. That's how I would think of it too, but I believe we'll just keep it as a homework item tonight just so we can make sure that we have the right number to provide for Nathan tomorrow morning -- or to the Review Board, excuse me, for the twenty (20) year water level since that would be representative of, kind of, the last year worst-case scenario. Thank you.

MR. NATHAN RICHEA: Thank you. It's Nathan Richea with the Water Resources Division. I'm not sure if we want to try to capture the homework or whether I should just read my last one here, and then it might be combined together. The last one is: How much retention time is available between the operating level and the base of the spillway? So we might have the elevation difference as the homework item, but

1 then I want to sort of know what -- what capacity does
2 that relate to. Does it give you a seven (7) day
3 storage, thirty (30) day storage, sixty (60) day
4 storage? What capacity are we looking at?
5 MR. KEVIN HAWTON: Yeah, this is for
6 your twenty (20). So it's Kevin Hawton speaking. The
7 -- it's a minimum of thirty (30) days is what we've
8 got, and obviously before that, we've got more than
9 thirty (30) days, so...
10 MR. NATHAN RICHEA: Thank you. It's
11 Nathan Richea with the Water Resources Division. So a
12 1 metre, 1 metre plus freeboard between your spillway
13 and your maximum operating level gives you about
14 thirty (30) days of storage, or...?
15 MR. KEVIN HAWTON: Kevin Hawton with
16 Knight Piesold. I wouldn't say that it's a metre.
17 I'll have to check what the operating levels are, and
18 we can add that to the homework item.
19 MR. DAVID SWISHER: David Swisher for
20 Avalon.
21 I just want to clarify that that's for the year twenty
22 (20) period. Prior to that, there is, obviously, much
23 more capacity available. Thank you.
24 MR. NATHAN RICHEA: Thank you. It's
25 Nathan Richea with the Water Resources Division. So,

1 yes, the homework item is what is the elevation of the
2 operating level with the polishing pond within the
3 tailings containment facility at year 20 of the
4 operations.
5 THE FACILITATOR TOOGOOD: Shannon,
6 could you read the (MISSING AUDIO)?
7 MS. SHANNON HAYDEN: Okay, Shannon
8 with the Review Board. I'll read the first part.
9 "Avalon to provide the elevation of
10 the operating level of the polishing
11 pond within the tailings facility at
12 year twenty (20) of operations."
13 THE FACILITATOR TOOGOOD: And was that
14 -- were there other items attached to that homework
15 requirement?
16 MR. NATHAN RICHEA: Thank you. It's
17 Nathan Richea with the Water Resources Division.
18 Yeah, I was just looking for a retention time with
19 that elevation difference, but they mentioned it was
20 thirty (30) days. They can confirm that today if they
21 wish, or they can include it as a homework item.
22 THE FACILITATOR TOOGOOD: Also for
23 this, to clarify for this particular item, that it is
24 the Nechalacho site that this question is for. That's
25 correct? Yes. Okay.

1 MR. RALPH GRISMALA: Ralph Grismala,
2 ICF Marbek. And just to clarify, the -- the question
3 is about the operating levels of the polishing pond or
4 of the -- the other part of the storage facility?
5 MR. NATHAN RICHEA: Thank you. It's
6 Nathan Richea with the Water Resources Division.
7 Yeah, I was curious about the polishing pond portion
8 alone. I'm assuming the company will maintain a 1
9 metre freeboard for the rest of the facility for the
10 tailings.
11 MS. SHANNON HAYDEN: Avalon -- Shannon
12 with the Review Board. The second part:
13 "Avalon to provide the associated
14 ca..."
15 Okay, back to the first one:
16 "Avalon to provide the elevation of
17 the operating level of the polishing
18 pond within the Nech -- Nechalacho
19 site tailings facility at year
20 twenty (20) of operations."
21 Okay. And the second part:
22 "Avalon to provide the associated
23 capacity and retention time of the
24 polishing pond for the same, within
25 the Nechalacho site tailings

1 facility at year twenty (20)."
2 THE FACILITATOR TOOGOOD: And, Nathan,
3 how does that read for the concern?
4 MR. NATHAN RICHEA: Thank you. It's
5 Nathan Richea. Yeah, that reads fine.
6 THE FACILITATOR TOOGOOD: Okay, and,
7 Avalon, is this still within the realm of a homework
8 item, as in deliverable tomorrow, or is that -- is it
9 kind of getting towards an undertaking?
10 MR. DAVID SWISHER: David Swisher,
11 Avalon. We'll deliver that tomorrow. I just want to
12 clarify that this -- this is homework item number 11.
13 I believe homework item number 10 was to provide the
14 Review Board the presentation. Can I get confirmation
15 on that?
16 MS. SHANNON HAYDEN: This is Shannon
17 with the Review Board. Homework number 11 was from
18 yesterday. That was the tailings facility high
19 resolution imagery. So today, we are on to twelve
20 (12) and thirteen (13).
21 THE FACILITATOR TOOGOOD: We can -- we
22 can term the presentation as homework and just put it
23 after what we've done here, if that is -- okay, so
24 that's what we'll do. We'll just make the -- we'll
25 call it the refresher presentation that Avalon has

1 been giving. We'll make it homework. It's -- and I -
2 - I believe it'll be in my inbox by the time I get in
3 my office, but we'll call it homework just for the
4 purposes of the session and keeping track. Thank you.
5 And Shannon?
6 MS. SHANNON HAYDEN: Okay, Shannon
7 with the Review Board. The commitment for the
8 presentation is:
9 "Avalon to provide the Review Board
10 with a copy of presentations from
11 the August 16 technical sessions."
12
13 --- COMMITMENT NO. 6: Avalon to provide the
14 Review Board with a copy
15 of presentations from the
16 August 16 technical
17 sessions
18
19 THE FACILITATOR TOOGOOD: Thank you.
20 And moving on with the (MISSING AUDIO) on this topic.
21 MR. NATHAN RICHEA: Thank you. It's
22 Nathan Richea with the Water Resources Division. I
23 just had the same question about whether or not Avalon
24 has considered the potential for poor water expulsion
25 in higher concentrations being built up in the

1 tailings facility at the Thor Lake site drue -- due to
2 cryoconcentration and the impacts that may have on the
3 water quality within the polishing pond.
4 MR. KEVIN HAWTON: Kevin Hawton with
5 Knight Piesold. Pretty much the same comment. The
6 rate arises around a metre for this facility as well,
7 so we don't see that as a problem.
8 THE FACILITATOR TOOGOOD: Okay. I
9 don't see any further questions from Nathan. Again,
10 opening up to the floor on this topic. I believe it's
11 mine waste management, waste rock, and tailings, both
12 sites.
13 If not, we will move on to closure and
14 reclamation. So unless there are any -- this is an
15 opportunity -- Ralph, go ahead.
16 MR. RALPH GRISMALA: Ralph Grismala,
17 ICF Marbek. In one (1) of your early slides in this
18 part of the presentation, you showed the waste rock
19 quantities, and you indicated some of them, I think,
20 came from the actual mining activities, and some came
21 from some other quarried source.
22 In the DAR, you presented some
23 information on the acid base accounting for waste
24 rock. Was that strictly from the mine, or did that
25 include other potential quarries. And also, the

1 results reported, and I think it was only a few tests,
2 it showed that there was a low potential, or -- or
3 unlikely potential for acid generation, but some of
4 the samples did have some potential.
5 So I just would like to hear some
6 discussion of the potential acid mine drainage issues,
7 in general, related to the waste rock.
8 MR. DAVID SWISHER: David Swisher with
9 Avalon. Yeah, there was no potential acid drainage
10 from any of the rocks that we've sampled. There, I
11 think, was acid neutralizing the -- was -- there was
12 one (1) sample, I think, in the test work that had a
13 pH of 7.5, if I recall properly, that anything that
14 gets between a range of seven (7) and seven and a half
15 (7 1/2) then they -- they consider it no longer
16 neutralizing, but -- but acid neutral, if you will.
17 The -- the rocks that were tested -- I
18 guess going back to your original question, Ralph, the
19 rocks that were tested were tested on the ore body,
20 which has the highest potential for -- for that type
21 of acid generation, if you will, to occur.
22 So we -- most of the test work we've
23 done has been on that. We know on the surface and the
24 granites that there is no potential for that. That's
25 also been tested. In fact, for the airstrip

1 extension, when we utilized the waste materials and
2 the surficial materials that were at the -- the old T-
3 zone (phonetic), we actually had those tested as well
4 at the request of the land use officer, and all of
5 those came back non-acid generating.
6 We -- through the extensive test work
7 we have done through SGS, we -- we've not had any --
8 any test come back that would indicate any acid
9 generation.
10 MR. RALPH GRISMALA: Ralph Grismala,
11 ICF Mareck. I just want to mention that in -- in some
12 cases because of the timing of the rate of reaction of
13 the acid generating constituents of the rock and the
14 neutralizing constituents, sometimes there's an
15 imbalance that doesn't show up for, you know, thirty
16 (30) years/forty (40) years, at which point you can
17 still get some generation even though the relatively
18 short-term tests that have been done in the lab
19 indicate that unbalance thing should be okay.
20 But if the -- if the rock is, you know,
21 not clearly in the non-acid generating category, there
22 may be potential during some parts of the life of the
23 mine for -- for some of the rock to generate some
24 acid, and just want to make sure that -- you know,
25 obviously that'll be picked up in the monitoring

1 program.
2 And with regards to the one (1) sample
3 you mentioned, the -- the line in the DAR says, you
4 know, for that particular sample it suggests that
5 insufficient carbonate neutralization potential and
6 the potential for acid generation under oxidizing
7 conditions with some qualifiers after that indicating
8 that was probably not a serious problem. And it was
9 an unusual sample, so I -- I don't think we can
10 category (sic) exclude the potential. I just want to
11 raise it as an issue to be aware of.
12 MR. DAVID SWISHER: David Swisher with
13 Avalon. Thanks for that, Ralph, agree. Also, you
14 know, with that understanding too and some of the --
15 the optimizations we've done in our planning process,
16 I just want to maybe note, if we could get the lights
17 turned off again, on the map that I currently have up
18 here, I just want to show that originally -- I better
19 put my glasses on here -- originally we were looking
20 at providing quarried rock for some of the makeup
21 construction activities, other than that that would be
22 coming from the waste products underground, in the --
23 in the granite here, which actually lie outside of the
24 tailings management facility.
25 It's now been confirmed and also part

1 of our existing land use permit and quarry permit to
2 extract the granites that are high elevations in this
3 area. And based on the granites in this area that are
4 contained within the TMF, we feel very confident now
5 that we can -- any quarrying that we have to do to
6 make up additional materials for construction, other
7 than what we bring up from the underground, will be
8 quarried in -- from inside the tailings management
9 facility and not outside.
10 So if anything, that just provides, I
11 think, also another level of -- of -- but I guess the
12 -- at the end of the day, it's all granites here,
13 surficial granites that have been exposed to the
14 elements for millions of years. Thanks.
15 MR. RALPH GRISMALA: Ralph Grismala,
16 ICF Marbek. Thank you for the clarification.
17 THE FACILITATOR TOOGOOD: Thank you.
18 Are there any other questions on mine waste
19 management? Nathan, go ahead.
20 MR. NATHAN RICHEA: Thank you. It's
21 Nathan Richea, with the Water Resources Division.
22 Long story short, I wonder if we could get the same
23 commitments maybe for the trafficability and
24 monitoring during operations for the tailings at this
25 facility as well.

1 MR. DAVID SWISHER: David Swisher,
2 with Avalon. We have no problem with committing to
3 the monitoring of the Nechalacho tailings management
4 facility. So if -- if the Review Board could just
5 repeat the commitment, the last commitment made, and
6 insert -- or replace "L-37" with the "Nechalacho TMF".
7 THE FACILITATOR MERCREDI: And I'll
8 weigh in here. I think it's a cut and paste function
9 on Word. Hopefully that helps instead. That would
10 shortcut this process by a bit.
11 MS. SHANNON HAYDEN: Okay, Shannon,
12 with the Review Board. This is -- just to clarify,
13 it's just for the second, the monitoring part and not
14 the contingency for both? Okay. So it would read --
15 this would be commitment number 9, three (3) for
16 today.
17 "Avalon commits to a contingency of
18 placing a tailings cover during the
19 winter and designing it sufficiently
20 to maintain long-term stability,
21 including summer thaw periods, for
22 the Necha -- Nechalacho tailings
23 facility."
24 THE FACILITATOR MERCREDI: We'll get
25 the number right. We'll get the wording first. Was

the wording -- Nathan, was the wording -- did the wording capture the concern? I'm seeing an affirmation there.

So we'll -- we'll take a moment and -- and -- to look at the numbering there and then -- and get back.

--- COMMITMENT NO. 7: Avalon commits to a contingency of placing a tailings cover during the winter and designing it sufficiently to maintain long-term stability, including summer thaw periods, for the Nechalacho tailings facility

THE FACILITATOR TOOGOOD: Nathan, do you have a follow-up?

MR. NATHAN RICHEA: Thank you. It's Nathan Richea, with the Water Resources Division. Yeah, so there's -- the contingency of placing in -- in the winter, if -- if it's required for trafficability. And then there was the contingency --

1 or, sorry, the commitment to monitor tailing
2 saturation and traffic abi -- trafficability during
3 the course of operations.
4 MR. DAVID SWISHER: David Swisher,
5 with Avalon. I -- I guess as a contingency that's --
6 we -- we can commit (MISSING AUDIO) particularly for
7 this site there won't be that problem. But as a
8 contingency, we -- we certainly have no problem
9 committing to that as well.
10 THE FACILITATOR MERCREDI: So just for
11 clarification, this was on that last commitment and
12 the wording of -- of that? That's -- that's what --
13 that's the subject here? I -- I just -- I just want
14 it clarified because, again, that is a commitment that
15 -- that Avalon is making.
16 I'll put it out there. Does Shannon
17 need to modify what she read, her most recent reading?
18 MR. NATHAN RICHEA: Thank you. It's
19 Nathan Richea, with the Water Resources Division. The
20 most recent reading was fine. There's a second
21 reading, and it might need some modification. I think
22 the commitment for the hydrometallurgical -- number 7.
23 MR. DAVID SWISHER: Cut and paste
24 number 7, and replace "L-37" with "Nechalacho".
25 THE FACILITATOR MERCREDI: Yeah. Cut

1 and place -- cut and paste number 7 and replace "L-37"
2 with "Nechalacho", yes, as David did not say into the
3 mic. He didn't, no.
4 What we'll do is we'll take -- we'll
5 take a short break, just a couple of minutes so we --
6 we can get the numbering down, because that's --
7 that's important as well. So we'll take about five
8 (5) minutes. Avalon, or, sorry, David, go ahead.
9 MR. DAVID SWISHER: After the break,
10 could you also, Review Board, confirm if we are going
11 to end up having to run over time-wise tonight, as we
12 may have to adjust other commitments? Thank you.
13 THE FACILITATOR MERCREDI: By show of
14 hands, are there many more questions for mine waste
15 management, waste rock and tailings, because it --
16 closure and reclamation? Not seeing any hands, so
17 after this short break -- and -- and it will be
18 literally five (5) minutes -- we'll move on to closure
19 and reclamation and the discussion there from both
20 sites.
21 We'll just take a quick five (5)
22 minutes, literally, and so nobody stray too far, and
23 then we'll continue the discussion on closure and rec.
24 Thanks.
25 I'll do a one (1) minute warning. It

is 4:04.

And if I could have everybody in the room find their seats, please, just so we can make the best use of our time here for -- for the remainder of the day.

Closure and reclamation, by show of hands, can -- can I see who has any questions on closure and reclamation, just so we have an idea of -- of order? Okay, and sorry?

Okay, and just by show of hands, again, for -- for those of you who -- that are now here, it -- yeah. Okay, so, again we're moving from wa -- mine waste management, waste rock, tailings for -- at both sites. We are ending that and moving into closure and reclamation.

So we'll start with a very brief presentation by Avalon on that subject, and then we'll launch into -- and -- and can I ask that Avalon keep that brief as well, just so we can make the best use of our time?

CLOSURE & RECLAMATION, BOTH SITES

PRESENTATION BY AVALON:

MR. MARK WISEMAN: Okay, Mark Wiseman, Avalon. We certainly recognize that mine closure is a

1 pretty sensitive subject, certainly given the -- some
2 of the scars on the land from historical mining
3 activity. So this is -- is an important topic for us,
4 and so we're hoping that we can give you a nice
5 overview and -- and answer any questions that you
6 have.
7 Closure planning is a -- is an
8 essential part of the overall planning of -- of any
9 major mining project, and it's also a key component of
10 the regulatory process and a requirement to -- to be
11 done, to -- in order to assess the viability of a
12 project and -- and in some cases, can actually affect
13 the design.
14 The present plan that we're going to
15 talk about today is based on the twenty (20) year mine
16 life, and I'm going to talk about all of the
17 components that are in the Northwest Territories here.
18 I would point out that we have already
19 had some consultation with Aboriginal partners and the
20 community and -- and other stakeholders -- pardon me,
21 engagement, not consultation. But that -- this is
22 just the beginning. Closure plans are living
23 documents, and this engagement will incur -- occur
24 over the life of the mine.
25 So, long story short, we're -- we're

1 going to update the mine any time that there's a
2 significant change -- or, update the closure plan, any
3 time that there is a significant change in the
4 project, because that could affect a wide variety of
5 things, such as financial assurance.
6 Even if we don't do any changes, we'll
7 review it every five (5) years and we'll do more
8 frequent reviews as we get closer to the actual
9 closure date, just to make sure that the plan is
10 valid, it's got ongoing revelance -- relevance, and --
11 and it's still accurate and recognizes the -- any
12 potential changes in expectations of -- of our
13 stakeholders, regulators, or Aboriginal partners.
14 The goals of closure planning are
15 pretty common at most sites, but just to quickly
16 review, number 1 is the -- protect the public health
17 and safety. But very close behind, min -- minimize
18 the adverse effects of mining on the environment.
19 We want to establish conditions that
20 lead to the acceptable long-term fiscal and chemical
21 stability of all of our reclaimed areas. We want to
22 make sure that the conditions that we leave the -- the
23 site in are appropriate to the surrounding
24 environment, as well as any identifined -- identified
25 land uses at that point in time. We want to make sure

1 that everybody knows what we're proposing to do and --
2 and get their feedback on that.
3 And, where possible, we would like to
4 sustainably use any assets that are available at the
5 end of the mine, where that is practical and,
6 obviously, where it's approved. And obviously, the
7 final component, often missed in other closure plans,
8 is the social responsibilities.
9 To do a good closure plan, you design
10 the site for closure. So there's quite a number of
11 things that have made this site's closure plan a
12 little bit easier than others, and we've made
13 decisions early on that help to make this closure
14 plan, I think, better.
15 One (1) of the obvious ones was even
16 though it's substantially cheaper to -- to open pit a
17 mine than it is to go underground, and our RO body
18 (phonetic) is certainly shallow enough to open pit, we
19 decided early on that we would go underground.
20 This means that we don't have large
21 waste rock dumps on the surface. You eliminate that
22 aesthetic problem as well as reclamation costs
23 associated with it and -- and all sorts of other
24 things. So that was a decision made early on that
25 helps us make sure that this closure plan is -- is

1 easier to do.
2 Obviously, as part of our ongoing
3 design, we are trying to minimize the footprint. I
4 think you've seen a couple of examples of that
5 already, where we've reduced the size of the tailings
6 management area. We've jigged the plant site a little
7 bit, made it a little smaller. So those kinds of
8 things all help to make closure that much easier.
9 We have targeted a walk-away design. A
10 lot of the older mines have had to do things like
11 perpetual treatment, where they end up treating the
12 water over and over and over. We won't have to do any
13 of that with this closure plan. We should be able to
14 -- after a -- a certain time period, when we've proven
15 that we've met the qual -- or, the requirements that
16 we've targeted, then we should not require any long-
17 term maintenance for the site.
18 We have made the decision not to have
19 any landfills on site, again making closure that much
20 easier. We will progressively reclaim where we can.
21 Some examples of that could be the -- the downstream
22 slopes of the tailings management area, for example.
23 We have maximized the placement of our
24 tailings underground. And by doing that, we make the
25 tailings management area smaller; and, again, it makes

1 the -- the closure that much smaller and easier.
2 Our docks are -- are -- have been
3 designed to be seasonal, so very easily removed at the
4 end of the project and, frankly, at the end of every
5 barging season.
6 We propose that we will reuse or sell
7 for reuse as the preferred option for any
8 infrastructure that's left on site. And those uses
9 will continue to be reviewed during the life of the
10 project. And very often, I've found that things like
11 maintenance facilities have a very positive use for
12 the community at the end. So again, with the
13 community and regulator's permission, those kinds of
14 things might be one (1) of the aspects of the closure
15 plan.
16 Secondarily, we will recycle unusable
17 materials, where economically appropriate. We will
18 dispose of all unsaleable, non-recyclable, non-inert,
19 and hazardous materials in approved waste facilities.
20 Inert materials, such as cement foundations, may be
21 used for ground stabilization where necessary, for
22 refilling ventilation shafts, for example, or placed
23 under -- underground or re-vegetated in place where
24 that's aesthetically appropriate.
25 I mentioned all vertical holes will be

1 filled with these types of materials. And if that's
2 not possible, then we will certainly provide the
3 appropriate caps.
4 All roads and air -- airport facilities
5 that are not required to remain post-closure -- and
6 again, making sure that they're -- if they are
7 remaining, that the appropriate identified groups or
8 whatever are responsible enough to maintain them
9 appropriately -- but that anything that's not going to
10 be left behind post-closure will be re-vegetated.
11 With respect to tailings, Nechalacho
12 tailing reclamation, unfortunately you guys have taken
13 a little bit of my thunder away already with the
14 previous discussions. But nevertheless, the exposed
15 tailing, there's going to be a cap to -- or
16 potentially seeded directly. We don't know if we can
17 do that yet. But the initial approach would probably
18 be to -- to cap it and -- and re-vegetate it.
19 I already mentioned the progressive
20 rehabilitation of the downstream embankments of the --
21 of the dams or berms. Service runoff controls and
22 permanent spillways will be constructed.
23 One (1) of the things that you don't
24 want to have if you want to walk away from these
25 things is water up against your dams or berms, so we

1 will breach those and make sure that they are capable
2 of passing the probable maximum precipitation events.
3 And correct me if I'm wrong, but that will make sure
4 that we don't significant water behind the dams.
5 Infrastructure that is not required at
6 the site will be removed, and it is either sold, or
7 disposed, or recycled as appropriate.
8 And we are committing to post-closure
9 monitoring, about five (5) years at this point in
10 time. And we will monitor all aspects appropriate for
11 closure planning, such as water quality, physical
12 stability of any structures that are remaining, making
13 sure the erosion protection that -- that has been put
14 in place are in good shape, that the re-vegetation
15 that has been done is successful and self-sustaining,
16 and that all the other -- any other key environmental
17 indicators that we are deciding -- that we decide to -
18 - to track will -- will meet the objectives of those
19 indicators.
20 At Pine Point -- that's another shot of
21 the L-37 pit, by the way -- but tailings are going to
22 be placed in that pit, as you know. And some people
23 uf -- ufmist -- euphemistically say it's sort of like
24 two (2) wrongs making a right, where we put the
25 tailings into this pit and we're going to rehabilitate

1 it.
2 So the -- the -- we talked earlier
3 about getting these tailings covered in a stable
4 manner, and we'll be re-vegetating them and we'll be
5 studying that re-vegetation, as well as -- as we
6 mentioned earlier, the stability aspects of the -- the
7 tailings design so that -- or, the tailings themselves
8 so that we can ensure the -- the walkaway condition of
9 those covers and the re-vegetation.
10 I had actually hoped to start some of
11 the re-vegetation test work in the area this year, but
12 I'll probably have to wait until next year. But
13 certainly ongoing reclamation studies will be done so
14 that that's known well in advance what we have to do.
15 And again, the same post-closure monitoring will take
16 place at this site.
17 Social considerations, again, what the
18 key social requirements may or may not be twenty (20)
19 years from now; difficult to predict. However, some
20 fundamental principles will be used when we're looking
21 at -- at the social components of -- of closure. And
22 they include treating all employees consistently and
23 fairly and with dignity and respect.
24 We will communicate to employees and
25 the community in a -- in a proactive and in a timely

1 manner well in advance, so people are -- are well
2 aware of -- of when it's going to occur.
3 We'll provide support for and
4 participation in the development of about placement
5 programs -- including, hopefully, to other Avalon
6 facilities if they exist at the time -- to assist our
7 employees in training activities to help them in any
8 of their future endeavours.
9 And as part of all this over -- overall
10 process, we will be empowering our employees to make
11 their own choices and decisions and -- and provide
12 human-resources support for that as well as maintain
13 human-resources support for a period after closure to
14 make sure that the final requirements are met.
15 And finally, as is required by
16 regulation, well, besides the post-closure monitoring,
17 which I've talked about earlier, there will be a -- a
18 financial assurance for the plan that will be in place
19 prior to operations that will be available for any
20 planned or unplanned closure costs, as per regulatory
21 requirements, and will be adjusted as required during
22 the process in the event we have to make a -- a change
23 to the closure plan, as I discussed earlier.
24 So very briefly, that's an overview of
25 what we're looking at in terms of closure. I'd be

1 happy to take any questions.

2

3 QUESTION PERIOD:

4 THE FACILITATOR TOOGOOD: Thank you

5 very much for the presentation. So we'll open the

6 floor up to questions on closure and reclamation.

7 MS. SARAH-LACEY MCMILLAN: Hi. It's

8 Sarah-Lacey, with Environment Canada. I know it was a

9 quick overview of your presentation. But you

10 mentioned in your progressive reclamation, where

11 practical, that there would also include downstream

12 slopes of the TMF.

13 Can you elaborate, please?

14 MR. MARK WISEMAN: I -- I just meant

15 the progressive component of it. Certainly some parts

16 of the tailings management area, for example, we won't

17 be able to progressively rehabilitate. Roads that

18 we're using we can't progressively rehabilitate, so

19 it's not practical to -- to do those.

20 But where we stop using the road or

21 things like the -- the back slope of the dam, where we

22 can do that more or less anytime, those will be done

23 well in advance of closure.

24 THE FACILITATOR TOOGOOD: And that was

25 Mark Wiseman, with Avalon.

1 MS. SARAH-LACEY MCMILLAN: Sarah-
2 Lacey, with Environment Canada. Thank you. I have
3 another question relating to response to IRs. We had
4 asked for an elaboration of what is meant by more
5 natural conditions when you reclaim. And you
6 indicated that the tailing cover would involve
7 redevelopment of several march and wetland areas.
8 Is that still the case?
9 MR. KEVIN HAWTON: Kevin Hawton,
10 Knight Piesold. I think Rick actually wrote that, but
11 I'll try and cover it for him. Basically, yeah. I
12 mean, we're going to breach the embankment, establish
13 the closure spillway, and in the area of the polishing
14 pond would become sort of like a natural wetland.
15 MS. SARAH-LACEY MCMILLAN: Sarah-
16 Lacey, with Environment Canada. Has there been any
17 research or plans been -- to develop the construction
18 of the wetlands or the marshes for both the tailing
19 sites?
20 MR. MARK WISEMAN: Other than the use
21 of organic material that -- that we have -- have
22 collected prior to the actual opening of facilities,
23 using of that material will certainly be a component
24 of the -- of the rehabilitation process.
25 Wetlands themselves, in -- in the -- in

1 this particular area, once you've got the water in any
2 kind of stable condition, it's -- it's hard not to let
3 them rehabilitate. So again, if we find out after a
4 year or two (2) that we need help with it, that's
5 certainly something we can do.
6 But we fully anticipate that the -- the
7 wetland component, given that it will be naturally wet
8 and with organic materials, should rehabilitate itself
9 quite quickly.
10 MR. DAVID SWISHER: David Swisher,
11 with Avalon. Just to add to that, we have committed
12 that we're going to be conducting reclamation updates
13 in our reclamation plan at least a minimum every five
14 (5) years and probably every year or more frequently
15 in the -- in the final five (5) years of operation.
16 Thank you.
17 THE FACILITATOR MERCREDI: Were there
18 fur -- further questions from Environment Canada?
19 MR. NATHAN RICHEA: Thank you. It's
20 Nathan Richea, with the Water Resources Division. So,
21 yeah, the wetland and the polishing pond and -- and
22 the breaches, those will be conducted after it's
23 confirmed that the site is stable and objectives are
24 being met, as far as closure and such, right?
25 Like you're not going to do those types

1 of activities if doing such would cause unexpected or
2 unanticipated impact to the receiving environment?
3 MR. MARK WISEMAN: Yes, for sure.
4 Certainly the -- the reclamation or cover and
5 reclamation of the tailings will take place early on.
6 But we would also like to breach that dam early on.
7 Once that stable cover is placed on the tailings and,
8 as I mentioned, stable erosion control and drainage is
9 established, then we would like to breach that dam at
10 that point in time so that we can also get the wetland
11 recovering as well. Mark Wiseman.
12 MR. NATHAN RICHEA: Thank you. It's
13 Nathan Richea, with the Water Resources Division. I'm
14 curious to see -- usually during the interface between
15 tailings and the polishing pond, there's a -- there's
16 an area of saturated tailings that is very difficult
17 to traffic as well as to place materials on for cover.
18 I was wondering how you might tackle
19 that area and potential wave erosion and suspension of
20 sediments within your tailing facility during that
21 breach or prior to that breach?
22 MR. MARK WISEMAN: I think we
23 discussed that a little bit earlier. But certainly,
24 where it's not accessible in the -- the summertime
25 period, you simply do that in the wintertime.

1 MR. NATHAN RICHEA: Thank you. It's
2 Nathan Richea, with the Water Resources Division.
3 Yeah, I guess what I'm getting at is that if -- if you
4 place a cover in the winter in the area, like the
5 interface zone between the polishing pond and the
6 tailings, and it's stable in the winter, and summer
7 happens and ice thaws, basically, your cover just
8 sinks into the -- into the tailings, and the tailings
9 are -- are again exposed.
10 You might want to try to do that again
11 the next sum -- next winter, so you go out and put
12 your cover on there again. And then, potentially, the
13 next summer, it thaws and it sinks into the tailings
14 again.
15 So I was just wondering if you've tried
16 to battle that and come up with a strategy to -- to
17 handle, if there is a polishing pond or an open-water
18 area within your tailings facility, how you would sort
19 of close that and cover it to avoid suspension of
20 sediments and potential instability to the cover over
21 time?
22 MR. DAVID SWISHER: David Swisher,
23 with Avalon. Just before Mark responds, I just want
24 to remind you that on the -- on the Nechalacho
25 tailings facility -- and certainly we've discussed the

1 -- the hydromet tailings facility extensively, but on
2 the Nechalacho side, the TMF and the materials that
3 are going there are extraordinarily competent, based
4 on the -- the test work we've done. So we have less
5 of a concern in that area with regards to being able
6 to capping that material.
7 I think Mark wanted to add something.
8 MR. MARK WISEMAN: Certainly, yeah.
9 Mark Wiseman. Yeah, and -- and again, given that the
10 -- the discharge from that facility will be through
11 the pumping system, we can certainly pump down that
12 water prior to the establishment of the cover so that
13 we avoid that problem. And then once the stability is
14 there, we can breach the dam.
15 MR. NATHAN RICHEA: Thank you. It's
16 Nathan Richea. I was actually going to suggest that
17 as a potential option. Typically, you try to get as
18 much water out of the facility as you can, provided
19 that, in many instances, there are fines, even in a
20 solid, more granular-type facility. When you're going
21 through grinding and -- and milling, there are a
22 variety of fractions of tailings that get reported to
23 the facility, including some larger fractions, but
24 also some very difficult slimes or fine material that
25 won't settle.

1 So de-watering is an option, and -- and
2 we can do that to a certain extent. But after a
3 certain depth, you start to resuspend some of that
4 extra-fine material. That's the material that's
5 difficult to place covers on and to deal with at
6 closure. So it looks like you're looking into it. I
7 was just trying to see if you've -- how far you've
8 progressed into that assessment. So I don't have any
9 other questions about that.
10 Regarding the post-closure monitoring
11 period, do you anticipate that, if the conditions
12 don't sort of meet the predictions in the five (5)
13 year period, that you would extend the post-monitoring
14 period monitoring time, I guess, further than the five
15 (5) years, if warranted?
16 MR. MARK WISEMAN: Yes. Mark Wiseman.
17 Yeah, we would do that.
18 MR. NATHAN RICHEA: Thank you. It's
19 Nathan Richea. Would that be applied to both sites,
20 the Thor Lake site as well as the hydrometallurgical
21 site?
22 MR. MARK WISEMAN: Yes, it would.
23 Mark Wiseman.
24 MR. NATHAN RICHEA: Thank you. It's
25 Nathan Richea, with the Water Resources Division. In

1 response to some of our information requests about the
2 hydrometallurgical site, it's suggested that it may
3 take as many as eighty (80) years for the water to
4 move from the site where you're disposing your
5 tailings to enter Great Slave Lake.
6 I was just wondering how you might sort
7 of balance the post-closure monitoring period and the
8 potential eighty (80) year lag between impacts that
9 might -- you might see in Great Slave Lake, and how
10 you've considered that.
11 MR. MARK WISEMAN: Yeah. The --
12 there's a couple of components to that. We discussed,
13 I believe, yesterday the modelling that we'll be
14 preparing. We'll certainly be able to monitor the
15 progression of any plume over twenty (20) years. We
16 can determine whether that plume is acting as our
17 model has predicted. If it hasn't, we can modify the
18 model to make it work. And -- and, as -- as we're
19 doing that over the life of the mine, we should be
20 able to validate what's happening and take any
21 corrections, as required. Did I say Mark Wiseman?
22 Mark Wiseman.
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea, with the Water Resources Division. Do
25 you know if there's any contingencies that are

1 available to the -- to the mine if the mixing does not
2 occur according to the predictions? So, you know, you
3 have your series of monitoring wells from your -- from
4 your site down towards Great Slave Lake. You know,
5 maybe within 100 metres, your model predicts that it's
6 going to mix to the background concentrations of the
7 aquifer.
8 However, if you have a series of
9 monitoring wells, maybe a kilometre or 5 kilometres
10 downstream and we still don't see the mixing, at what
11 point we would either put in more monitoring wells, or
12 are there any contingencies available?
13 Like, a first contingency might be to -
14 - to remove water and maybe treat, but obviously
15 there's a lot of water down there. It may not be the
16 best option to handle that situation.
17 Have you put any conc -- any consi --
18 do you have any considerations in the event that the -
19 - the mixing of that water and -- and the aquifer
20 water doesn't quite meet your predictions and there's
21 a plume moving towards Great Slave Lake?
22 MR. MARK WISEMAN: Mark Wiseman. We
23 certainly wouldn't wait twenty (20) years to be able
24 to look at alternatives. I think very early on in the
25 process, should -- should we get a plume such as that,

1 we would take steps to deal with that at that point in
2 time and -- and not wait -- wait until closure to do
3 that.
4 MR. NATHAN RICHEA: Thank you. And
5 I'm not sure if I want to do this. It's Nathan
6 Richea, with the Water Resources Division. I'm
7 looking for a commitment that they would implement
8 measures during the operations that indicate that if
9 the mixing doesn't go according to their plume
10 modelling, they would take steps during operations to
11 prevent degradation of the receiving environment over
12 the longer term.
13 MR. DAVID SWISHER: David Swisher,
14 with Avalon. Yeah, we -- we have no problem with
15 that. I -- I think being that we are committed to
16 responsibly developing this project, that's the right
17 thing to do.
18 THE FACILITATOR MERCREDI: Hi,
19 Shannon. And Shannon, sorry? And can you re --
20 please -- please restate that, Nathan?
21 MR. NATHAN RICHEA: Thank you. It's
22 Nathan Richea. Can we look at the transcripts? I'm
23 looking for a commitment from the company that during
24 operations, monitoring will be done to assess mixing
25 within the -- I can't remember what the term is pl --

1 the aquifer, such that comparisons can be made to the
2 modelling and, if necessary, contingencies implemented
3 to prevent...
4 MR. DAVID SWISHER: Can we simplify
5 that a little bit?
6 MR. NATHAN RICHEA: Sure.
7 THE FACILITATOR MERCREDI: Sorry, on
8 the mic, please.
9 MR. DAVID SWISHER: David Swisher,
10 Avalon. Would it be easier to just indicate that
11 Avalon commits, during operations, to reconcile the
12 monitoring of the aquifer down gradient of the L-37
13 tailings facility and reconcile that against the
14 model?
15 Does that -- and -- and, of course,
16 then the mitigation beyond that. If -- if it -- if
17 there's any potential mixing that's not occurring that
18 -- predicted by the model, then Avalon takes steps to
19 mitigate further down -- down gradient in the aquifer.
20 MR. NATHAN RICHEA: Thank you. It's
21 Nathan Richea, with the Water Resources Division.
22 Yeah, I think the concept is there. It's just, how do
23 we get this written down? And it may be best to do,
24 like a sidebar with the transcriber and then when
25 we're done with that we can just read it on to the

1 registry and then -- instead of having me do a version
2 and you do a version and then have her read it after.
3 It's -- it's probably best if we just sit down and
4 work out the wording and then just read it into the
5 record.
6 THE FACILITATOR TOOGOOD: That sounds
7 excellent. Perhaps, and for the sake of timeliness
8 today, if we could work on the wording of that
9 commitment and perhaps read it into the record for
10 tomorrow, in the morning? It might be easier. I've
11 written down a couple of wordings already, but we
12 could get that, I think, down pat for tomorrow, if
13 that's all right? I'm seeing agreement from Avalon
14 and AANDC. So we could keep the questions flowing.
15 MR. NATHAN RICHEA: Thank you. I had
16 a question. In the presentation there was mention
17 that no landfills will be required for the operation.
18 Is that for both sites, or is that one (1) site over
19 the other?
20 MR. MARK WISEMAN: Yes. Mark Wiseman.
21 We have no plans to have landfills at either site.
22 MR. NATHAN RICHEA: Thank you. It's
23 Nathan Richea, with the Water Resources Division. How
24 do you -- how will you be disposing of your waste? I
25 guess, during an operation there's all kinds of waste

1 materials, whether it's food wastes or machinery
2 wastes, all kinds of solvents, containers, a variety
3 of different wastes.
4 How -- how do you plan on sort of doing
5 that? Obviously, if they're combustible, you'll burn
6 them. If -- if they're hazardous, you'll store them
7 and transport them off site.
8 But just the general day-to-day waste -
9 - steel, scrap steel, that kind of stuff -- are you
10 proposing to put it in your tailings containment
11 facility or are you going to stockpile that material
12 and transport it all off site?
13 And if you do stockpile that material
14 and transport it all off site, where will you be
15 dispose -- ultimately disposing that material?
16 MR. DAVID SWISHER: David Swisher,
17 Avalon. So we'll just be burying it in the lake. I'm
18 just joking. Let the record show I'm just joking.
19 At both sites it's a little bit
20 different, just because of the logistics. But
21 generally, in terms of what we're planning right now,
22 is that we would have specific sorting areas for
23 specific items. So if we have recyclables, that puts
24 -- we put that into a specific area, and we can bring
25 that into the com -- into town for recycling.

1 We have the combustibles that then,
2 based on the type of combustibles, we can incinerate.
3 We have specific bins at each site for these things.
4 The waste oil, basically, there'll be specific areas
5 to hold our waste oil so that we can burn those in the
6 waste oil heaters during the -- the -- the winter
7 months.
8 Any hazardous wastes -- whether it's
9 aerosol cans, batteries, that sort of thing -- they
10 will have a special container that we will store those
11 in, in which case then when we're ready we can bring
12 them in to the appropriate disposal fill area at
13 either location.
14 So that's, right now, what we're
15 planning to do to try and make it as -- as simple and
16 organized so that also our employees understand it
17 very clearly, because the more simple you can make it
18 for everybody at site, then it's very easy to comply
19 with making sure that you don't have any mix-up with
20 those consumables.
21 With regards to steel, we're not going
22 to have a whole lot of scrap steel at site, since most
23 everything -- except during the construction activity.
24 It will be after the construction activity that we
25 would have to dispose of any excess steel. Beyond

1 that, we really wouldn't have a whole lot of -- of
2 excess steel, if you would. So hopefully that
3 answered your question.
4 MR. NATHAN RICHEA: Thank you. It's
5 Nathan Richea, with the Water Resources Division.
6 Yeah, it helps answer the question. I guess --
7 provide some context to the question.
8 In the North, it's always been a
9 challenge, particularly at some of the communities, to
10 handle industrial waste that may come from the various
11 sites. So I'm just curious on whether the final
12 disposal area or location is proposed to be within the
13 Northwest Territories and whether that would be a
14 municipal-type landfill or whether you're proposing
15 industrial-type disposal facilities that were more
16 typical and down south, like south of sixty (60)?
17 Just curious on if you had any thoughts
18 on that.
19 MR. MARK WISEMAN: To -- to the extent
20 possible, it will be local, but I -- I think, you
21 know, when you look at the kinds of quantities of --
22 of steel and things like that and the availability of
23 transportation, particularly at Pine Point, but we can
24 ship those -- those greater quantities of material
25 and, who knows, might even make some money from them.

1 So the bulk of that material won't have
2 to go to local landfill sites. And -- and, you know,
3 as part of the waste management plan, we'll -- we'll
4 make sure that those kind of things are identified.
5 And, again, as we nail down these -- as we get closer
6 and closer to closure, then we'll find out exactly
7 where we're going to be putting those and -- and
8 identified the tonnages that will be involved in those
9 disposal activities. Mark Wiseman.
10 MR. NATHAN RICHEA: Thank you. It's
11 Nathan Richea, with the Water Resources. Have you
12 engaged the Department of Municipal and Communif --
13 Community Affairs and the potential for using
14 municipal disposal sites for waste materials from
15 operation?
16 MR. DAVID SWISHER: It's David
17 Swisher, with Avalon. I think we answered this
18 yesterday, but I'll just clarify. No, we haven't.
19 We've just been waiting to see if we're going to get
20 through this process or not. That -- that's a joke
21 for the Review Board.
22 But, no, we haven't. We fully intend
23 to. And as I mentioned, I think it was yesterday. I
24 do have a meeting in the community of Hay River to
25 also address that. Thank you.

1 MR. NATHAN RICHEA: Thank you. It's
2 Nathan Richea with the Water Resources Division.
3 Again, I just want to caution. I have a fair bit of
4 experience with dealing with municipal water licenses
5 that include water, drinking water, and solid waste
6 facilities.
7 There is not a lot of capacity at these
8 -- these communities to handle any type of waste. And
9 if industrial waste is requiring disposal, there isn't
10 a lot of opportunity for disposal within the Northwest
11 Territories. So I just caution that for -- for the
12 company.
13 MR. DAVID SWISHER: David Swisher with
14 Avalon. I appreciate that caution. We'd certainly
15 appreciate any suggestions. We certainly will do our
16 due diligence in meeting with the municipal groups in
17 determining what kind of capacity there is. But if --
18 if AANDC can provide any suggestions, we'd certainly
19 appreciate that.
20 THE FACILITATOR TOOGOOD: Nathan, do
21 you have any followup or further questions on closure
22 and reclamation? So I'm going to take that as no more
23 questions from AANDC. Are there any other questions
24 on closure and reclamation? Environment Canada, go
25 ahead.

1 MS. SARAH-LACEY MCMILLAN: Hi. It's
2 Sarah-Lacey. So I had a chance to regroup my thoughts
3 on -- on the wetlands. So we're going back there. So
4 you indicated you'll be using the organics from the
5 area to assist with your re-vegetation of the
6 wetlands?
7 MR. KEVIN HAWTON: Kevin Hawton with
8 Knight Piesold. Yeah, that's the organics, that's
9 true.
10 THE FACILITATOR TOOGOOD: I'm sorry,
11 Lacey, could you turn off your mic. Thanks.
12 MR. KEVIN HAWTON: The organics he's
13 referring to are the organics that are stripped from
14 the foundation preparations for the embankments, et
15 cetera, quarries, et cetera, yeah.
16 MS. SARAH-LACEY MCMILLAN: It's Sarah-
17 Lacey, with Environment Canada. So you haven't
18 already begun studies. But will you be doing studies
19 to verify the establishment of these march areas?
20 UNIDENTIFIED SPEAKER: Establishment
21 of wetlands is actually a pretty well developed
22 science right now. We've been doing these sorts of
23 things for a decade or two (2). And -- and the
24 established wetlands, for a variety of purposes, is,
25 you know, I would say, you know, there's a state of

1 the art for doing that and it -- it's fairly easily
2 done compared to starting from scratch.
3 So wetland development is -- is
4 something that we certainly have a lot of experience
5 in. And we don't foresee any problems with that.
6 MR. NATHAN RICHEA: Thank you. It's
7 Nathan Richea with the Water Resources Division
8 Aboriginal Affairs. I was just curious on the
9 response there about wetland development.
10 Do you know of wetland development or
11 wetland usage in areas north of sixty (60) and how
12 successful they've been at reducing contaminants of
13 concern?
14 MR. MARK WISEMAN: Mark Wiseman. I
15 don't know about north of sixty (60). I've certainly
16 been actively involved in a lot of other wetlands
17 where -- where removal of -- of those materials of
18 concern have been very successful. Having said that,
19 we're not anticipating that our tailings closure
20 design will require that kind of polishing.
21 We anticipate that the water quality be
22 -- will be very good without it.
23 MR. NATHAN RICHEA: Thank you. It's
24 Nathan Richea, Water Resources Division. Thank you
25 for your response. I was just curious if there's been

any northern ones. It's a very challenging climate up here, and there's a limited amount of species.

Do you know if you would be introducing any sort of invasive species if you were going to establish wetland type environment or whether you'd be using more traditional localized vegetation?

MR. MARK WISEMAN: Yeah, we'd certainly be using local vegetation. Mark Wiseman.

THE FACILITATOR TOOGOOD: Thank you very much for those questions. Are there any other further questions on closure and reclamation? I'm -- it looks like I'm not seeing any other additional questions on closure and reclamations. I'll just do a quick check with the -- no, the sound tech's indicating there's no questions on the phone lines.

So with that, is it fair to say we're going to end the topic of closure and reclamation? I'll take that as an affirmative. So that's pretty good. We're right on time, it's one (1) minute ahead of schedule. I'll take that up by filling it up with -- no. We'll go to review of tasks for the developer, and I think we agree that we'll look at the homework tasks, and perhaps we will summarize the commitments tomorrow.

So with no further ado, Shannon, could

1 you please take it away. Before we go to that, sorry,
2 I neglected to -- does Avalon have any final comments
3 with respect to closure and reclamation?
4 MR. DAVID SWISHER: Yes, I just wanted
5 to ask that homework item number 13, elevation of the
6 polishing pond as well as capacity and retention time
7 in year twenty (20), be moved to an undertaking given
8 that our expert here is flying back first thing in the
9 morning and would have limited time. We want to make
10 sure that we -- we get it right before providing it to
11 the Board. If it can be an undertaking, we can
12 provide it under the same undertaking as the water
13 balance.
14 THE FACILITATOR TOOGOOD: Yeah, it's
15 duly noted, and we'll shift that homework item to, as
16 you indicated, to the undertaking that concerns the
17 water balance. So, Shannon...?
18 MS. SHANNON HAYDEN: So to review
19 homework for today with the removal of numbers 12 and
20 13, that was commitments 1 and 2 for today, and there
21 is one (1) that remains. So this is now -- I'm sorry,
22 I just want to make sure that the numbering is
23 correct. Commitment -- or sorry, homework item number
24 14 and number 1 for today:
25 "Avalon to provide the Review Board

1 with a copy of presentations from
2 August 16 technical sessions."
3 MR. DAVID SWISHER: David Swisher,
4 Avalon. I just want to confirm that that has been
5 sent to Paul Mercredi, and that homework item has been
6 completed. Thank you.
7 THE FACILITATOR TOOGOOD: Thank you
8 very much. With that, are there any final comments
9 from either the floor or from Avalon? Nathan, go
10 ahead.
11 MR. NATHAN RICHEA: Thank you. It's
12 Nathan Richea with the Water Resources Division of
13 Aboriginal Affairs and Northern Development Canada.
14 Again, I probably want to preference my
15 questions for closure and reclamation; obviously, the
16 department is very interested in closure and
17 reclamation of the site. I had a few questions today,
18 but like I mentioned previously, my focus mainly has
19 been on site specific water quality objectives, and we
20 covered that over the first two (2) days. I have not
21 been able to get through all the information that's
22 been provided on closure and reclamation, and we still
23 are concerned with closure. I'm not saying there's
24 any issues, but we'll have to do that review.
25 And then regarding the commitments and

1 homework items, I think we do have to follow up a bit
2 here on some wording on one (1) or two (2) and -- I
3 can't remember which numbers they were, so I look
4 forward to that.
5 THE FACILITATOR TOOGOOD: Okay. Oh,
6 sorry. I believe we may have some comments.
7 MS. CAILIN MAKIN: Cailin Makin with
8 the Review Board. I was just actually looking through
9 my notes, and I have done some work on wetland
10 reclamation, and there is one (1) example North of 60,
11 and that is at the Keno Mine, and that was a
12 engineered wetland to deal with a silver mine tailings
13 and also to use zinc. And they have had mixed results
14 over the long term, and basically the mixed results
15 were dealing with bacteria levels in the wetland. So
16 they do work with some success, but there has been
17 some issues over long-term remediation in that Keno
18 Mine.
19 THE FACILITATOR TOOGOOD: Thank you
20 very much. Ava -- okay. Avalon, do you have any
21 follow-up to that?
22 MR. DAVID SWISHER: David Swisher
23 with Avalon. Thank you for that.
24 THE FACILITATOR TOOGOOD: And with
25 that, seeing as we do have a couple of minutes to

1 spare, perhaps we could just finish off that one
2 commitment. There was some discussion with the
3 wording. Might as well get it done now while we still
4 have some time. So on that wording, if we could just
5 -- you know, perhaps if I could just throw a wording
6 that may encapsulate it, it would be that:
7 "Avalon commits to implement a
8 monitoring to verify the modelling
9 predictions of the effluent pru --
10 plume during the life of the
11 project, and if it's shown that that
12 effluent plume isn't..."
13 Sorry, now here's where my wording
14 falls apart. But before we get to the mitigation
15 part, perhaps we can just get the wording down for the
16 first part of it, and that was essentially that:
17 "Avalon commits to implementing
18 monitoring of the effluent plume
19 during the life of the produ --
20 project to ensure modelling
21 predictions are accurate."
22 Is that essentially correct? I am
23 seeing a general affirmative from most parties.
24 THE FACILITATOR MERCREDI: Nathan,
25 does that reading capture that concern?

1 MR. NATHAN RICHEA: Yes. It's Nathan
2 Richea, Water Resources. It's the first part of -- of
3 it, yeah.
4 THE FACILITATOR MERCREDI: Okay, and
5 so there's a second part to it? Just -- okay.
6 THE FACILITATOR TOOGOOD: So the
7 second part would be that, you know, if it's shown
8 that the -- the effluent plume isn't responding as
9 modelled and that there's potential for significant or
10 adverse environmental impacts, that Avalon would
11 commit to some sort of followup program to mitigate
12 those effects.
13 THE FACILITATOR MERCREDI: Nathan...?
14 MR. NATHAN RICHEA: Thank you. It's
15 Nathan Richea, Water Resources. I would summarize if
16 deviations occur from model -- from monitored data,
17 contingency measures would be implemented.
18 MR. DAVID SWISHER: David Swisher with
19 Avalon. I agree with Nathan's wording.
20 THE FACILITATOR MERCREDI: And we'll
21 get Shannon's wording because that's the one (1) that
22 -- that matters. Okay.
23 THE FACILITATOR TOOGOOD: All right.
24 We'll go back to do -- just to go back to the first
25 part of that two (2) part commitment. Essentially

1 that -- I was just -- would you require verification
2 on the first part?
3 MS. SHANNON HAYDEN: Okay, this is
4 Shannon. I'm with the Review Board. There was no way
5 I could copy what everybody just said. And I've had
6 three iterations in -- of this commitment. So I'm
7 just going to read what I have written, and then we'll
8 work from there.
9 I have:
10 "Avalon commits during operations,
11 to implement monitoring to verify
12 the modelling of effluent -- of the
13 effluent plume down gradient of the
14 L-37 tailings facility, assess
15 mixing, and initiate mitigation, if
16 required."
17 THE FACILITATOR MERCREDI: Nathan, how
18 -- does that capture the concern?
19 MR. NATHAN RICHEA: Nathan Richea,
20 Water Resources. Yeah, I think so. I kind of got
21 lost in it, but yeah, I -- I think it makes the --
22 like, I wasn't quite attentive. It's a long day.
23 THE FACILITATOR MERCREDI: It is a
24 very long day. Yes, for sure. One (1) more reading,
25 absolutely. Again, it -- this is an important thing

1 because it says something that Avalon -- it needs to
2 achievable and needs to be definitive for Avalon and -
3 - and the Review Board's con -- sake.
4 MS. SHANNON HAYDEN: Okay, Shannon
5 with the Review Board. I have:
6 "Avalon commits, during operations,
7 to implement monitoring to verify
8 the modelling predictions of the
9 effluent pru -- plume down gradient
10 of the L-37 tailings facility,
11 assess mixing, and initiate
12 mitigation, if required."
13 THE FACILITATOR MERCREDI: Assess -- I
14 -- I think what we were tyring to get at is that we
15 were assessing if the parameters in the monitoring
16 don't meet the predicted modelling results, then
17 mitigation measures would be implemented, if required,
18 yeah.
19 MS. SHANNON HAYDEN: Shannon with the
20 Review Board. I have:
21 "Avalon commits during operations,
22 to implement monitoring to verify
23 the modelling predictions of the
24 effluent prume -- plume down
25 gradient of the L-37 tailings

1 facility, assess the modelling
2 parameters, and initiate mitigation,
3 if required."
4 MR. NATHAN RICHEA: Thank you. It's
5 Nathan Richea with the Water Resources Division. I
6 think you need to include sort of -- some sort of
7 deviation in there. So assess parameters, and if
8 deviations are occurring, implement mitigation
9 measures.
10 MR. MARK WISEMAN: Again, if required.
11 It could be that things are better than we predict, so
12 -- Mark Wiseman, so.
13 THE FACILITATOR TOOGOOD: And that's a
14 fair point.
15 MS. SHANNON HAYDEN: Okay, Shannon
16 with the Review Board:
17 "Avalon commits during operations,
18 to implement monitoring to verify
19 the modelling predictions of the
20 effluent plume down gradient of the
21 L-37 tailings facility, assess the
22 modelling parameters and deviations,
23 and initiate mitigation, if
24 required."
25 MR. MARK WISEMAN: It -- it's close.

1 It's a -- you might put in there if there are
2 deviations. I think that's the final key.
3 MS. SHANNON HAYDEN: Shannon, with the
4 Review Board.
5 "Avalon commits during operations to
6 implement monitoring, to verify the
7 modelling predictions of the
8 effluent plume down gradient of the
9 L-37 tailings facility, assess the
10 modelling parameters, and if there
11 are deviations, initiate mitigation,
12 if required."
13
14 --- COMMITMENT NO. 8: Avalon commits during
15 operations to implement
16 monitoring, to verify the
17 modelling predictions of
18 the effluent plume down
19 gradient of the L-37
20 tailings facility, assess
21 the modelling parameters,
22 and if there are
23 deviations, initiate
24 mitigation, if required
25

1 THE FACILITATOR MERCREDI: Thank you,
2 Shannon. Thank you, Shannon. And I -- and I thank
3 you ver -- everyone else for sticking around. I know
4 that some people left. I appreciate everyone's
5 patience. These are important issue to -- to capture
6 within this Environmental Assessment for the Review
7 Board's consideration.
8 Thank you again everyone for their
9 participation. Thank you to the Avalon team for --
10 for having their team members available for -- for
11 these three (3) days, and, of course, there will be
12 tomorrow as well.
13 Tomorrow just -- just to -- for the
14 audience that is here, is air emissions and socio-eco
15 cultural issues, archeological and heritich resour --
16 heritage resources and other issues.
17 We're starting at 9:00 ending at 5:00,
18 which is also three (3) minutes from now. Thank you
19 again, everyone, for your patience and participation
20 today.
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22 --- Upon adjourning
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1 Certified correct,

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7 Wendy Warnock, Ms.

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